CA2ALNS
85A37
c.2

[redacted]

GISLATURE LIBRARY
FEB 7 1986
EDMONTON

[redacted]

Alberta

THE AGRICULTURAL POTENTIAL
OF
NATIVE COMMUNITIES
PHASE II

Native Affairs Secretariat
December 1985

TABLE OF CONTENTS

PAGE

I. Introduction..... 1
Purpose..... 1
Scope..... 2
Sources and Methodology..... 3

II. Agricultural Activity in Native Communities: An Overview..... 4-5

III. Issues in Agricultural Development..... 6

A. Credit..... 7-9
B. Training..... 10
C. Northern Agriculture..... 11-12
D. Irrigation..... 13
E. Band/Settlement Farms..... 14
F. Land Use Planning..... 15
G. Agricultural Alternatives..... 16-17
H. Agencies..... 18-19

IV. Results and Observations..... 20-24

Appendix A: Community Agriculture Profiles

Fort William District..... 25
Boyer River Band..... 26
Tall Cree Band..... 27
Little Red River Band..... 28
Dene Tha' Band..... 29
Metis Settlements in the Fort Vermilion Area:
Paddle Prairie Metis Settlement..... 30

Lesser Slave Lake District..... 33

Horse Lake Band..... 34
Drift Pile Band..... 35
Duncan's Band..... 36
Grouard Band..... 37
Sawridge Band..... 38
Sturgeon Lake Band..... 39
Sucker Creek Band..... 40
Swan River Band..... 41

Metis Settlements in the Lesser Salve Lake Area:
Big Prairie Metis Settlement..... 42
East Prairie Metis Settlement..... 45
Gift Lake Settlement #3E..... 48

PAGE

Saddle Lake/Athabasca District..... 50
Beaver Band..... 51
Saddle Lake Band..... 52
Cold Lake Band..... 53
Frog Lake Band..... 54
Kehewin Band..... 55

Caslan Settlement #7W..... 56
Kikino Settlement #7E..... 58
Elizabeth Settlement #9..... 60
Fishing Lake Settlement #10..... 63

Edmonton/Hobbema District..... 65
Alexis Band #437..... 66
Alexander Band #438..... 67
Hobbema Bands (Ermineskin #443, Louis Bull #439.....
Montana #442, Samson #444)..... 68
Enoch Bands #440..... 70
Paul Band #441..... 71

Blackfoot/Stony/Darcee District..... 72
Blackfoot Band #430..... 73
Sarcee Band #432..... 75
Stoney Bands (Chiniquay #433, Wesley #475
Bearspaw #473)..... 76
O'Chiese Band #431..... 78
Sunchild Band #434..... 79

Blood/Peigan District..... 80
Blood Band #435..... 81
Peigan Band #436..... 83

I. Introduction

Purpose

This document represents the second and concluding component of a study into the agricultural potential of Alberta's Indian reserves and Metis settlements. While Phase I examined the land capability, climate and accessibility of each community, Phase II is intended to address the following:

1) existing levels of agricultural activity and land use;
2) economic, educational and other obstacles which hinder development of identified physical potential; and,
3) resources available or required to overcome these obstacles.

Scope

Phase I determined that of the 2,894,392 acres of land occupied by native communities in Alberta, more than half--1,562,977 acres--appears suitable for agriculture (corresponding to Canada Land Inventory Class 4 soil or better). Of this identified area, 919,413 acres are situated on reserves, encompassing 36 bands; 643,564 acres are found on settlements, with each of the eight having some suitable land.

Phase II comprises 42 communities--34 bands and each of the settlements--chosen according to criteria outlined in the Phase I study, * or because of special potential in such areas as livestock production and market gardening. The reader will notice that in the profiles, somewhat greater attention is paid to the settlements. This is due largely to a perception that previous documentation on the agricultural potential of the settlements has been relatively limited. In all cases, the study is dependent on the information provided by communities and otherwise obtainable from published sources. Hence there can be considerable variation in the degree of detail found in the individual summaries of farming activity.

---

*In the Canada Land Inventory system, lands are arbitrarily categorized into those capable of sustained production of annual crops in a well-managed rotation program (Classes 1 through 4), and those which either are suitable only for improved or natural forage crops or have no agricultural potential (Classes 5 through 7, and Class 0). It should be noted that, depending on such factors as climate and topography, there are areas of Class 5 and Class 0 land which could support the growing of specific crops.

**Criteria included land with moderate capability or better, suitable climate, access-including an all-weather road to farm markets, proximity to rail transportation and availability of public media--and an adequate population base to sustain an agricultural industry. Exclusion from Phase II does not necessarily indicate that a community has no potential.

For the purposes of this study, a relatively broad definition of agriculture is used, encompassing not only conventional crop and livestock production but also such alternatives as market gardening and wild game ranching. The concern here is to encourage greater utilization of land resources, rather than to restrict the types of agricultural development which conceivably could proceed. However, the study does not deal directly with the forestry option. Although for some northern communities there may be a choice between forestry and agriculture, no attempt is made to compare the two in terms of their respective potential for economic development. Moreover, it would seem that any such determination could vary depending on local situation.

This study, meanwhile, does attempt to deal briefly with several broader topics and concerns related to agricultural development:

1) access to credit and capital assistance;
2) training;
3) northern agriculture;
4) irrigation;
5) band/settlement farm operations;
6) land use planning; and,
7) alternatives to conventional types of agriculture.

The discussions of these topics are intended not as exhaustive treatments, but rather as overviews of the issues involved, which together indicate that agricultural development is a complex undertaking, requiring initiatives on several fronts; that solutions cannot be found, for example, simply in increased financial support. Particular needs in each of these topic areas are noted in the conclusions.

If there is a deficiency in this study, it lies in the lack of detailed information about individual native farmers. It would seem helpful, for example, to know more about such variables as age, level of education, annual income and size of operation, and to be able to compare the results with those for non-native Alberta farmers. As it is, many of the study's observations in this regard tend to be more impressionistic than empirical, and thus of somewhat limited utility. Further research may be desirable to derive a clearer picture of individual native farmers, even if it is possible to identify on a larger scale the issues affecting agricultural development in their communities.

Sources and methodology

The contents of this study are based on information provided by the native communities involved, and by several agencies and government departments: the Alberta Indian Agricultural Development Corporation, Indian Affairs and Northern Development, the Metis Development Branch of Alberta Municipal Affairs, and Alberta Agriculture. The latter department's extensive publications in such areas as northern agriculture, farm economics and livestock production were particularly useful.

The profiles of individual communities were built upon work done by Group Four Rural Service Corp., which conducted interviews on most of the reserves and settlements selected for inclusion in Phase II. This material was supplemented by research carried out within the Native Affairs Secretariat. In the case of the settlements, additional visits were made to each community in order to discuss agricultural issues with local farmers and officials, and to observe existing farm activity. Extensive use was also made of land use planning inventories published or made available in draft form by the Metis Development Branch. As well, discussions were held with field staff of the branch. In the case of some reserves, additional information was supplied by the Alberta Indian Agricultural Development Corporation.

Overall population figures indicated in the profiles of reserves and settlements are taken from 1983 surveys conducted by Indian Affairs and the Metis Development Branch respectively. The groupings according to age--0-5 years, 6-18 years and 19 years and older--are based on 1981 census figures; hence these totals do not necessarily correspond with the overall 1983 populations. Land use figures, meanwhile, represent the most recent available from either community or government sources. Because specific types of production and land use can change from one year to the next, these figures should be considered only as approximations of agricultural activity.

Acreage figures for each Reserve may not correspond to totals published by the Department of Indian Affairs due to differences in measurement procedures. The latter are based on survey plans whereas the figures in this study are totals of calculations made for each Canada Land Inventory component.

II. Agricultural Activity in Native Communites

It is sometimes assumed that agricultural development on Alberta reserves and settlements is a recent phenomenon, related to a gradual turning away from traditional means of livelihood such as hunting and trapping. In fact, while this may be true for some communities, it is not so for many others, particularly in southern and central parts of the province, which claim long histories of agricultural activity. On the Blood Reserve, for example, grain and cattle production is traced to the late 1800s; by 1916, large quantities of what, oats and hay were being grown, without government financial assistance. In the case of many reserves and settlements, moreover, it would seem that there were more people engaged in farming a generation ago than there are today. This decline has been attributed largely to modernization, and the financial and technical demands it imposed on farmers. In one view,

> not until mass mechanization of Canadian agriculture took place did a wide gap between Indian and Non-Indian farmers appear. The importance of the horse as a centre of farm life declined, and with the cultural and educational background of the Indians, it was difficult for them to find a place in the new fast-paced technical world.*

The problem of adjustment was compounded by Native farmers' inability to obtain bank credit as a result of their incapacity to use the land as collateral for loans. Meanwhile, in some locations, the availability of wage-employment opportunities, primarily in resource extraction, provided a more lucrative--though at times short-lived--alternative to farming.

At present, there is considerable variation amony native communities in both the type and intensity of agricultural activity, reflecting differences in physical potential, socio-economic factors and overall levels of interest. In the north, apart from the Peace River-Fort Vermilion corridor, the focus is on small-scale cow-calf production by both individuals and band operations, although in some cases herd sizes have decreased because of the depressed state of the livestock industry. Agricultural land is used for growing feed grains and hay, as well as for pasture, often unimproved. In southern and central parts of the province, meanwhile, agricultural activity is somewhat more diverse and involves some larger-scale operations. A number of bands maintain cattle ranches and, in a few cases, feedlots. Grain is grown extensively for outside sale by individuals, band farms and outside lessees of reserve land.

---

*"The Economic potential of the Blood Indian Reserve," Department of Indian Affairs and Norkthern Development, 1968; quoted in "Blood Tribe Agricultural Development Program," 1976. Similar assessments can be found in historical accounts of other reserves and settlements.

Despite these differences, it would seem that individual native farmers across the province could be characterized, with exceptions, as having relatively small operations which often are sustained only through some form of outside income. Hence, for many, farming is a part-time occupation. Native farmers also tend to be middle-aged or older, although this observation does not apply equally to all communities. In so far as it does hold, it may reflect the high entry barriers faced by younger people, as well as the continuing availability of other employement.

Nonetheless, the reserve and settlement profiles which follow do indicate considerable interest in agriculture. For many communities, the land base is the greatest resource available for development, and farming is viewed as a means of long-term economic growth and as a source of jobs for present and future generations.

III. Issues in Agricultural Development

The following discussions of selected issues in agricultural development serve to establish a backdrop against which to assess the potential of reserves and settlements. Together, they provide some sense of the scale, the diversity, and the inter-relatedness of the problem which exist for native communities--over funding, training, geography, land use priorities and government services. The discussions also indicate that solutions do not reside simply with a single agency or level of government. Rather, those issues which affect agricultural development encompass not only the federal and provincial governments, but also the communities themselves.

Again, these discussions are intended as broad summaries of the selected subject areas. In each case, there are other points which might be made. Obviously, as well, the importance of particular problems and the relevance of particular options presented here will vary according to local situations, a fact which must also be recognized and reflected in any developmental thrust.

A. Credit and Capital Assistance

Native farmers's lack of access to bank credit is widely cited as the major obstacle to developing and sustaining a viable agricultural sector on reserves and settlements. While banks generally have become more reluctant to make loans given the current state of the industry, with many farmers in Alberta facing repayment problems, the situation is compounded in native communities because the title to land is held by the Crown. Thus individuals are unable to use the land they occupy as security against loans. *Reserve and settlement farmers, moreover, are ineligible for low-interest financing and loan guarantee programs available to other Albertans through the Agriculture Development Corporation, which require an applicant to own or be acquiring land.** The overall effect of this situation is to ensure that the vast majority of native farmers continue to operate on a small scale, at a disadvantage next to their outside neighbours, even though their land may be available to them for little more than the cost of developing it. Admittedly, there are native farmers who would be unable to show sufficient experience or commitment to qualify for financing from either commercial or governmental sources, regardless of the matter of title. But for those with proven farming ability, this limitation has been the cause of considerable frustration.

The situation generally is more severe on the settlements, where no major development programs are available to individual farmers. On one settlement, the maximum amount which has been loaned by the local banks is $5,000, with livestock or equipment used as collateral. On some other settlements, bank credit simply has been non-existent. The Settlement Sooniyaw Corporation, owned by the eight settlements, is seeking assistance from the federal Native Economic Development Program to establish a loan fund for various initiatives, including agriculture. But it remains to be seen whether the amounts involved under any resulting scheme will be sufficient to create viable units.

---

* Plans to transfer title from the province to the settlements would not appear to change this, because ownership would still not rest with the individual occupants.

**The ADC's Beginning Farmer Program, for example, provides a maximum loan of $200,000 at preferred rates--as low as six per cent over the first five years, under an incentive program--to those who qualify.

On reserves, meanwhile a limited number of options exist. Indian Affairs does provide farm loans through an economic development fund--although the scale is substantially smaller than through ADC--as well as some guarantees where other lenders are involved. The Alberta Indian Agricultural Development Corporation reviews applications both for loans and for guarantees and makes recommendations to the department. All final decisions are made by the Department of Indian Affairs. Eventhough AIADC does not lend money directly, the corporation has been successful in negotiating loans with conventional lenders for Indian farmers and ranchers. The AIADC also administers an equity fund through which some contribution--generally one-third of the capital cost--is made to particular projects. An equal investment of equity is required of the applicant. In the past year AIADC contributions totalled $240,000, for an average of $5,000 per applicant, restricting projects to minor farm improvements and equipment purchases. Meanwhile, apart from these options, there are cases where individuals have obtained significant amounts of bank credit based on merit or, more often, on the strength of guarantees provided by wealthier bands of which they are members. The federal Farm Credit Corporation has also shown some willingness to deal with reserve clients, either directly or through the AIADC, again on the basis of Indian Affairs guarantees. Nonetheless, while some credit and capital assistance is available on reserves, there are also widespread complaints that existing programs do not meet the needs of Indian farmers. Aside from lending financial support, AIADC provides the reserves with services such as training programs, agricultural workshops and field services. AIADC also works closely with other government agencies to facilitate access to existing government programs and services.

One out-of-province initiative which could serve as a model in this regard involves the Saskatchewan Indian Agriculture Program (SIAP). Formed in 1975 out of a concern to develop viable individual farms and fully utilize reserve land and human resources, and supported by combined federal and provincial funding. SIAP administers a loan guarantee program in cooperation with commercial lenders, primarily the Bank of Nova Scotia. Through an arrangement with the bank, a reserve farmer's application for a loan proceeds as follows:

1) The applicant and a SIAP field adviser prepare a farm plan outlining assets, liabilities, projected income and expanses.
2) The bank manager involved approves the loan, based on his own assessment.
3) The application is sent to SIAP head office and, if authorized, the loan is guaranteed from a designated fund. Normally financing is levered on a five-to-one basis, and any single loss is paid in full.

SIAP also guarantees loans with other banks and credit unions on an ad hoc basis, generally involving cash collateral for 50 per cent of the total. In all cases, should repayment problems arise, the lender contacts SIAP's head office or its field staff for follow-up assistance to clients, a key element in the program's success. In the past five years, the loss rate has been only 1.8 per cent on loans amounting to several million dollars. Meanwhile, between 1972 and 1982, the number of viable Indian farms in Saskatchewan increased from 40 to about 400, while the total acreage utilized more than doubled.*

SIAP has greatly advanced native agriculture, but such progress is costly. Currently, SIAP receives nearly two million dollars annually from DIAND as well as support services from the province and land development privileges from Special ARDA. While AIADC's present budget is not large enough to finance such a project, SIAP could definitely be used as an agricultural model for reserves in Alberta.

Finally, in terms of capital assistance, it should be noted that Alberta reserves and settlements differ vastly in their respective levels of agricultural development and, consequently, in capital needs. The Hobbema bands, for example, have used resource revenues to purchase additional farm land and up-to-date equipment. Toward the other extreme are native communities where agriculture is still at an early stage and where little capital is available for development. In such ases, greater direct assistance would be required in order to bring the land and the infrastructural base to the point where agricultural resources could be utilized. This may mean extensive clearing and breaking efforts in the north, or irrigation develofpment in the south.

On the settlements, meanwhile, another major concern has been access to the province's Range Improvement Assistance Program. While until now the settlements have been held by the Crown, they have been excluded from this program, which provides leaseholders of provincial lands with grants for range improvement projects and rental credits for one-quarter of the cost of maintenance and livestock distribution facilities. Extension of equivalent assistance to the settlements would allow for improvement of community pastures and other grazing land, and would ultimately result in a more viable livestock sector.

---

* A Decade of Success: Saskatchewan Indian Agriculture Program, Annual Report, 1981-82. Another interesting measure is the increase in gross farm income from an average of $3,500 in 1972 to $25,400 by 1979, where litle capital is available for development. In such cases, greater direct assistance would be required in order to bring the land and the infrastructural base to the point where agricultural resources could be developed. This may mean extensive clearing and breaking efforts in the north, or irrigation development in the south.

B. Training

The increasingly risky nature of farming, the rapidly changing technology involved and the marginal agricultural potential of much of the land in native communities all point to the need for greater access to training as a main component of any developmental thrust. Training is required in a range of disciplines, including:

1) cereal and hay crop selection and production;
2) animal husbandry and pasture management;
3) equipment maintenance and operation;
4) farm economics and financial management.

Presently, even on reserves and settlements where the level of farming experience is relatively high, few people, if any, have had formal training. Enrolment in agriculture programs at most colleges and universities in the province is minimal,* although some courses are taught at on-reserve institutions. Participation in the Green Certificate Program, in which a trainee works for an experienced farmer under a wage subsidy arrangement, similarly has been limited. Some band-owned farms consider training of members to be a major role, but the numbers employed generally are small.

Contact with district agriculturalists and other specialists, meanwhile, varies considerably among native communities. In some cases advice is regularly sought and seminars are conducted on topics of interest to local farmers. In other cases no working relationship would seem to exist. Generally, native communities are not well informed about the wide range of provincial and federal agricultural grants and assistance programs for which they and their members may qualify.

From the perspective of native communities, two concerns regarding training should be noted. First, the desire is not so much for theoretical instruction as for practical advice, accessible to individuals who may have limited formal education. Second, any commitement to provide training to native farmers will be meaningless unless they have access to land and to the capital required to develop it.

---

*At least four colleges--Olds, Lethbridge, Fairview and Lakeland, based in Vermilion--offer agricultural training in at least some of the following fields: farm and agribusiness management, mechanics, crop production, animal science and irrigation technology. Olds, Fairview and Lakeland also operate farms in conjunction with their programs. As well, Olds has programs in horticulture and home economics. The University of Alberta, meanwhile, offers professional training in severl areas of agricultural specialization.

C. Northern Agriculture

The problems and prospects relating to agricultural development in northern Alberta, where many of the native communities considered in Phase II are located, have been studied extensively, * and will be discussed only briefly here. Needless to say, there are many serious restrictions on agriculture in the region. A combination of physical factors--notably, the short growing season and, apart from the Peace River-Fort Vermilion area, poor soil quality--limit the varieties of crops which can successfully be grown to fast-maturing barley, oats, canola and hay. But a number of socio-economic factors also affect agricultural potential.

First, the necessity of clearing and breaking land requires a considerable initial investment. While some reserves and settlements have their own equipment and can do the work more cheaply, the costs of bringing new land into production can easily exceed $200 an acre. Moreover, because the process generally encompasses two years, there is no return on the investment for at least an additional year. As a result of the financial burden involved, clearing is often piecemeal and fields in some native communities are too small for viable crop production. However, it would seem that neither these communities nor their members would be capable of bearing the costs of a larger-scale land development initiative.**

Second, apart from the initial investment in land preparation, farm input costs generally are higher in northern Alberta--where the agricultural community is smaller and the supply infrastructure less well-developed than in the south-while returns per production unit are lower. ***Northern soils need more extensive fertilization and, in locations of high acidity, costly lime treatments. The shorter growing season can result in the need for a larger equipment investment, in order that seeding and are harvesting can be completed quickly. In the Peace River area, grain dryers are often crucial.

---

*For recent examples, see the following: Kathleen Beattie, Wayne Bond and Edward Manning, The Agricultural Use of Marginal Lands, Lands Directorate Working Paper No. 13, Environment Canada, 1982; M.L. Kelly and E. Moreau, The Economics of Agriculture in Alberta: Selected Issues, Environment Council of Alberta, 1982; Kathleen McDonald, Potential for Agricultural Expansion Relative to Forestry in Northern Alberta, Alberta Agriculture, 1983.

**One recent study suggested it may sometimes be cheaper to purchase land under cultivation than to develop new land. Peter Visser, A Study of the Land Development Costs in the Peace River Region, Alberta Agriculture, 1984.

***Kelly and Moreau, The Economics of Agriculture in Alberta: Selected Issues.

Third, while part-time, outside employment is necessary for many northern farmers, native and non-native, in supplementing their incomes and injecting much-needed capital into their operations. But such opportunities--generally in forestry, construction, and oil and gas--are not always available nearby, while farmers who feed cattle or have families may be unable to travel further for work during the winter. More important, those who do have outside employment may have greater difficulty in obtaining credit because their farms are given less than full attention. The result is a vicious circle: farms stay small and economically marginal, requiring operators to work outside, reducing the intensity of agriculture and thus the accessibility of bank credit needed to expand.

Fourth, there is a general lack of agricultural marketing and processing facilities in northern Alberta. Primary grain elevators are few, and at many delivery points there is no competition. Rail service is limited. Because grain traffic in the north is considered unprofitable, improvements to the rail system are not necessarily made and cars are in short supply. As a result, farmers must often carry a grain inventory of more than one year, requiring a heavy investment in on-farm storage facilities and increasing the risk of spoilage. For livestock production, meanwhile, distance from major exchange markets seriously affects the viability of such operations in more remote locations, including the Fort Vermilion area. As well, while some reserves and settlements have considered the idea of full-fledged feedlot operations in the north, combined with expansion of hay and feed grain production, economic conditions are generally unfavorable. Not only is the present cattle pricing situation bleak, but it has been suggested that northern Alberta feedlots face a competitve disadvantage next to their large commercial counterparts in the south, primarily because the dominant market for fat cattle is Safeway's in Calgary.*

---

*Lyle Smith, The Economics of Feeding Cattle in North-Central and Northern Alberta, Alberta Agriculture, 1981. Essentially, the closer a feedlot is to the processing plant, the lower the freight charges and weight loss to cattle in transport will be.

D. Irrigation

Large-scale irrigation development has been proposed for three southern reserves--Blood, Peigan and Blackfoot--now either bordered or crossed by rivers and works used to supply water to neighbouring irrigation districts. Presently there is only a small pilot project operation on the Blood Reserve. But all three bands have identified irrigation as the key to increasing agricultural production, and to making greater use of their respective land bases.

While the benefits of irrigation may be considerable, any such development would also involve major legal and financial obstacles. First, water rights, a matter of provincial authority, would have to be secured. In the Bloods' case, the province assumed a federal commitment to provide rights for 25,000 acres at the time jurisdiction was transferred. For the other two bands, the situation would be less clear. While the Peigans have asserted a claim of ownership over the Oldman River as it passes through the reserve, it would seem that the issues of jurisdiction and acquisition of water rights may require negotiation and, perhaps, litigation.

Second, the bands would need considerable financial assistance in order to construct the required works and distribution systems. It has been suggested that irrigation districts similar to those elsewhere in southern Alberta be created on the reserves--the major requirement is consent of a specified percentage of area farmers--and be made eligible for the same level of provincial government support. *Again, this would seem to be an issue for negotiation involving the bands, the province and the federal government.

Third, the additional equipment costs associated with irrigation farming should not be overlooked, particularly given the limited bank credit available on reserves. Irrigation farming also tends to require greater use of fertilizer and herbicide. Overall, the increased costs can mean that production of some conventional crops is no longer feasible.

---

*The province pays the total capital and maintenance costs for headworks and shares other capital and system rehabilitation costs with the irrigation districts on an 85-14 basis.

E. Band/Settlement Farms

Whether agricultural development should proceed through individual units or through band/settlement farms has been a matter of contention. The purpose here is not to settle the argument; examples could be found among Alberta native communities to support either course. Nonetheless, it may be helpful to discuss generally some strengths and weaknesses of the band/settlement farm alternative.

On one hand, band/settlement farms can provide an opportunity to concentrate limited development funds--for land clearing, for example--and thus create larger, more viable units than would be the case if the money was divided among a number of small-scale individual operations. Such farms can generate revenue for their communities, while providing jobs and practical agricultural training for some of their members.

On the other hand, some band/settlement operations have experienced problems as a result of personality conflicts or political pressures within their communities. If a farm is successful, there can be disagreement over whether to reinvest revenues in the operation, use them to provide other services, or even distribute shares to members. In some cases the best interests of the community and of the farm may differ. And while band/settlement farms do provide jobs, there is a tendency for senior managers to come from outside; on only a few reserves have serious efforts been made to develop capable managers from within the community.

There is, of course, no need for the two types of farm ownership to be mutually exclusive. Both can exist in a community, perhaps complementing each other; for example, a band/settlement farm may grow hay for sale to individual cow-calf operations. On one reserve, the intention is to train members and eventually break off parts of the band farm to create individual units for them.

F. Land Use Planning

By determining and implementing land use priorities, band and settlement councils can have some impact on agricultural development. Essentially, what is required is a balancing of competing uses--residential, commercial and recreational, among others--which saves as much good land as possible for farming and puts it in the hands of those able to fully utilize it. The specific issues involved naturally will vary considerably between communities. In northern locations where hunting and trapping are still prevalent, agriculture must contend with the need to preserve areas for wildlife. On reserves situated near major urban centres, there can be pressure for light industrial and higher-density residential development. Perhaps two land use issues, however, stand out as having a greater impact on agricultural development: the allocation of settlement land and the leasing of reserve land to outside farmers.

Settlement families generally have been allotted at least one quarter-section of land on the condition--not necessarily enforced--that they pay a nominal yearly fee and make certain improvements. The parcels tend to be clustered around settlement hamlets, often on land which has some agricultural potential but which may either be undeveloped or underutilized, for example, as rough pasture. The problem on some settlements is that there is little or no unallocated arable land available. On others, none exists within reach of present road networks; hence farmers wanting to expand have little choice but to develop land further away, while settlement councils use limited funds to extend access roads and utilities, even when good, uncleared land can be found closer to home. It has been suggested that future clearing involve larger tracts and that existing parcels be consoflidated into more viable units, but implementation of the latter measure in particular would generate political difficulties lfor councils. Similarly, in cases where virtually all settlement land has been allocated, some redivision in favor of settlers wanting to farm would seem one of the few options availabale to encourage agriculture, albeit a controversial one.

The practice of leasing land to outside farmers can be found on a number of reserves. In some cases band members have no interest in farming the land themselves, but in others the issue represents a dilemma for councils. On one hand, lease arrangements can provide bands and individual members with considerable revenues and can legitimately be viewed as the most profitable means of utilizing the land resource, particularly given the long-term investment required to farm it directly. Lessees may also hire band members and thus provide jobs and practical agricultural training. On the other hand, the fact that much of a reserve's arable land is leased to outsiders restricts would-be Indian farmers, for whom other employment opportunities may be scarce. Where such individuals have received agricultural training but have no chance to farm, considerable frustration can result. Again, however, the problem would seem to defy any easy solutions.

G. Agricultural Alternatives

It should be noted that agriculture is a risky business-inflated machinery costs, repairs and building supplies along with plummeting market prices has forced many farmers into bankruptcy. At this present stage it would be very difficult for Natives to become involved in farming as most lack the appropriate financing and farm training.

In view of the immense capital costs and, particularly in some northern areas, of the physical limitations related to conventional types of agriculture, several alternatives have been proposed for Alberta reserves and settlements. Typically these alternatives can be initiated on a smaller scale, with the possibility of expansion, and can also complement other land uses.

Wild game ranching has been suggested as an economically and culturally feasible use of marginal agricultural land, which could provide permanent employment, materials for crafts, subsistence meat for members and specialty red meat for outside sale. With proper coordination, game ranching could also be compatible with forestry operations in northern communities. All settlements and, no doubt, several reserves contain suitable habitat for ungulates. A pilot project has been initiated at Kikino Settlement, with the results being monitored to assess its applicability elsewhere. The Sucker Creek Band has also initiated a game ranching project. At this point, however, potential is limited by a lack of programs providing both technical assistance and low-interest financing.

The commercial breeding of recreational and draft horses is also considered a culturally compatible type of agricultural development. Horses are kept in large numbers on many reserves and settlements but at present little marketing occurs. One related option would be the raising of stock for rodeos, a prominent recreational activity, which now generally involves the contracting of stock from non-native operators.

Honey production, compatible with the growing of forage crops, is widespread in northern Alberta, so that skills could be learned from successful producers in the region. The amount of capital needed is relatively low, although beekeepers in the north would face the same high input costs as other farmers.

Market gardening of both vegetables and berry crops has been identified as a potentially viable, labor intensive activity which could begin on a small-scale--three-acre plots, for example--under various forms of organization. Vegetables can be grown in the north with careful selection of sites and crop varieties, as well as use of special techniques. The major limitations for northern communities would involve financing, again related to difficulties in obtaining bank credit, and marketing of produce. Because the communities can be a considerable distance from major population centres, marketing channels other than the popular 'farm gate sales' would have to be found, or else the focus of food production could be internal and thus less profit-oriented. Larger-scale market gardening would be possible should irrigation development proceed on southern reserves. Opportunities may also exist for growing such vegetables as potatoes under contract to nearby commercial processors. In marshy northern areas, meanwhile, the cultivation of wild rice would be another gardening option.

Wild rice production is an ideal alternative for areas too wet to support most forms of agriculture. In the Peace-Athabasca Delta region, Fort Chipewyan has already implemented a water management program, including the testing of wild rice. So far, a future in wild rice production looks promising as all three plantings carried out in 1983 were successful. The project is supported by Alberta Native Affairs and the Department of Indian Affairs and Northern Development. This project has the potential for duplicating the success of the La Ronge Wild Rice Corporation in Saskatchewan. AIADC and Alberta Agriculture work closely with the Alberta Wild Rice Growers Association in Lac La Biche, where wild rice development has offered employment and economic growth. A number of other agencies including the Canadian Executive Services Organization have also been active in the development of wild rice programs.

---

*Resources Management Consultants Ltd. Market Gardens in Native Communities, prepared for Alberta Native Affairs, March 1985.

H. Agencies

The task of agricultural development in native communities has involved, or could in future involve, a large number of federal and provincial departments and agencies. Federally, the main department is Indian Affairs, which delivers a wide range of administrative, technical and financial services to bands and individual members, encompassing such relevant areas as economic development, land use planning, training and community infrastructure. Much of the department's agricultural funding in Alberta is channelled through the AIADC, which deals with individual reserve clients, providing extension services and assistance in obtaining financing. The Department of Agriculture maintains research stations and substations at various locations in Alberta, and administers grant and subsidy programs. The Department of Regional Industrial Expansion and its predecessors in the area of rural development have shown interest in expanding agriculture in the north. The Farm Credit Corporation is involved in lending to reserve farmers on a limited scale. As well, the few Native Economic Development Fund may be a source of capital for community agricultural projects on both reserves and settlements.

Provincially, Alberta Agriculture administers many programs which could be of use to native communities and individuals, including extension services, laboratory testing, research, and farm grants and subsidies. The department has offices in more than 50 locations. Alberta Environment shares authority with Agriculture in the area of irrigation. The Metis Development Branch of Municipal Affairs provides administrative, technical and financial support to the settlements. The Native Affairs Secretariat offers some funding for economic development projects, including agriculture, on reserves and settlements. The Alberta Agricultural Development Corporation, while most of its programs are not now applicable to native farmers, is the provincial government's 'lender of last resort', providing a number of loan and loan guarantee options for beginning and expanding farmers.

The major issue involving these agencies is coordination. Where it is lacking, the result can be inefficient use of resources, or gaps in the agricultural support services provided to native communities. There are several cases from the past which could be cited here. For example, in some northern communities where large-scale land clearing efforts were made under a federal-provincial development agreement, much of the land has been allowed to regenerate to bush. Local people either were not committed to farming it, or else were unable to obtain the capital or technical advice required to keep the land in production.

Gaps in agricultural services may also result from the division of federal and provincial jurisdiction. While steps have been taken in recent years to make Alberta Agriculture's extension services available to reserve farmers, some uncertainty remains over to what degree this should be done. As a result, the level of services provided to reserves may vary across the province, depending in part on such factors as the priorities of district agriculturalists and the aggressiveness of bands. In some cases, it may not be clear which district office is 'responsible' for a particular reserve.

If the separate jurisdictions of the various federal and provincial departments were not a factor, a single delivery agency would perhaps be the best solution to the problem of coordinating agricultural services to native communities. However, there are other options available. Again, the model of the Saskatchewan Indian Agriculture Program may be helpful. SIAP field adviers and technical staff often are able to work out of provincial agriculture department offices, giving them better access for farm specialists and up-to-date information on programs available for their clients.

IV. RESULTS AND OBSERVATIONS

As Phases I and II indicate, the potential generally exists for greater agricultural production on Alberta reserves and settlements. But such development cannot be forced; the initiative must come from within these communities, from councils encouraging full use of land resources, from individuals interested in, and capable of, farming. What governments can do, at a minimum, is assist in identifying this potential-hence this study--and ensure that would-be and existing native farmers have essentially the same opportunities and access to programs as their non-native neighbours, taking into account the differences in landholding. Beyond that, support may be justified in cases where special economic, social and geographic disadvantages further hinder agricultural development. Recently a Memorandum of Understanding (MOU) on Native (Indian/Metis) Development was signed by the governments of Canada and Alberta in August, 1985 and encourages federal-provincial co-operation for Native development in the province. Agriculture was identified as a priority area under the MOU.

In any case, the key would seem to lie in the coordination of financial and other government initiatives. It is worthless, perhaps counter-productive, for example, to provide agricultural training if native individuals, once trained, cannot obtain sufficient credit or land in their communities to establish viable operations. The result may be only greater frustration. The task of agricultural development requires that governments and communities work together on a range of related problems. It is from this perspective that the following results and observations are presented.

Credit and Capital Assistance

1. Individual native farmers require access to bank credit at reasonable rates of interest, in order to develop land, purchase equipment, buildings and livestock, and maintain operations. This could be achieved through some form of loan guarantee program, involving either an established agency such as the province's Agricultural Development Corporation or a native-controlled structure such as AIADC. The AIADC could serve as the vehicle for delivery of a guarantee program to reserve farmers. In any case, follow-up advisory services seem essential to long-term success.

2. The formation of financial assistance programs should not restrict future growth and access to credit by established native farmers. AIADC is presently encountering this problem as more financial institutions are insisting on guarantees, because of the existence of such programs.

3. Where feasible, encouragement should be given to the possibility of joint ownership of farm equipment by two or more individuals, as a means of modernizing operations while freeing scarce capital for other purposes.

4. Particularly in some northern communities where agriculture is at a preliminary stage, requiring large-scale infrastructure and land development, and where local resources are limited, special assistance would be required at the outset to establish viable farm operations. Such assistance should be dependent on evidence of sufficient community interest, perhaps including clearing initiatives and a willingness on the part of members to participate in farm training programs.

5. The province's Range Improvement Program should be restructured in order to permit the participation of Metis settlements.

Training

6. Practical training is required in native communities in a range of areas, including:

   (1) cereal and forage crop selection and production;
   (2) animal husbandry;
   (3) pasture management;
   (4) equipment maintenance and operation;
   (5) farm economics and financial management.

   Where possible, such training should be available on or, at least, near reserves and settlements. It could be provided through various agencies; the extension divisions of provincial colleges and universities; the Alberta Vocational Centres; Alberta Agriculture, which conducts short courses on a range of subjects; and the AIADC.

6. Consideration should be given to the establishment of one or more model farms in selected native communities, in cooperation with a provincial agricultural college.

7. Efforts are needed to increase communication between native farmers and district agriculturalists. Without allocating blame, it would seem that insufficient use is made in many communities of the advisory services which are available. Similarly, there is often little awareness of agricultural assistance grants and programs. One approach to this problem may be for Alberta Agriculture to hire farm advisers--preferably native--with specific responsibility for these communities. The need in this regard would seem greatest on the settlements, as the AIADC provides some advisory services to its reserve clients.

8. Encouragement and possibly special incentives should be provided for native young people to acquire advanced agricultural training in such areas as farm economics, grain and livestock production and veterinary medicine.

9. The formation of 4-H clubs on reserves and settlements could serve to stimulate interest in farming on the part of young people.

Northern Agriculture

10. The socio-economic problems of northern agriculture extend beyond native communities and, as such, require broader attention than can be contained within the scope of this study. Nonetheless, it should be noted that the development of viable native farming operations in the north would be assisted by improvements in such areas as transportation, farm services, processing and marketing facilities, and crop varieties.

Irrigation

11. Irrigation development on the three interested southern reserves would, without doubt, result in more productive use of land resources, but it should not be regarded as an automatic economic windfall, or as the solution to all agricultural problems. Irrigation farming is expensive; it must rely on government subsidies for survival. And while a case can be made for giving reserves financial assistance potentially equivalent to that available to irrigation districts--albeit with some negotiated federal contribution--such a major commitment of public funds should be contingent on submission of comprehensive plans similar to those of the Blood Band. Such plans should include detailed soil analyses, economic projections and land use proposals.

Band/Settlement Farms

12. It can not be stated that band/settlement farms are necessarily more or less suitable than individual operations, in terms of developing agriculture in native communities. Either model, or a combination of the two, can be appropriate depending on such local factors as available capital resources, arable land and farming experience. Individual units can also be created out of band/settlement farms once members are capable of farming on their own.

13. Band/settlement farms would seem to require some insulation from the political process, although this may be difficult due to the size of their respective communities. As well, expectations for these operations should be made clear at the outset; is the primary goal profit, employment, provision of feed to individual ranchers, land development or something else?

14. In some communities, farm cooperatives may be a suitable compromise model of ownership which would improve access to capital and enhance accountability, while maintaining some distance from the political process.

15. Band/settlement farms should consider following the lead of the few which have instituted strategies to train local individuals to fill senior management positions now occupied largely by outsiders.

Land Use Planning

16. Land use plans have been prepared in recent years either by or for some reserves and all but one Metis settlement, although often they have not been fully implemented. In other communities, planning is needed to designate areas for agricultural, residential, commercial, industrial, service and forestry development, and in some cases for hunting and trapping. The intention in each community should be to preserve as much arable land as possible for farming, in blocks which are large enough to be viable.

17. While settlement councils attempt to encourage full utilization of previously-allocated agricultural land, new parcels should only be granted to settlers with demonstrated farming ability and interest in developing the land.

18. On reserves where the leasing of farm land to outsiders is an issue, band councils are faced with an unavoidable dilemma. While some bands have recognized that the original premise for leasing--to provide members with capital to maintain their own operations--has been refuted by experience, the resulting revenues make it difficult to reverse this policy. Any change, as well, would cause division between those wanting land and those earning lease income from it. But to use this is a rationale for retaining the status quo is to ignore the fact that tensions may well already exist. The ultimate goal of agricultural development should be Indian farming of reserve land, as members become capable, even if movement in this direction must necessarily be slow.

Agricultural Alternatives

19. In order to stimulate wild game ranching on reserves and settlements, technical and financial support programs must be implemented. As well, marketing initiatives are required to promote meat sales in urban centres.

20. While market gardening may generally be feasible for native communities, involving both economic and social benefits, further site-specific study is needed where interest warrants to identify suitable plots and crops, carry out market research and develop a business plan. It is also important that community aspirations be determined at the outset. In more isolated locations, the growing of vegetables for local consumption is an option.

21. Encouragement should be given for such other alternatives as horse breeding, beekeeping and wild rice cultivation. Where there is serious interest in a particular option, governments should be prepared to assist with feasibility studies. As well, any program developed to provide access to credit for conventional agriculture should also include alternative types.

Agencies

22. Greater coordination is needed among government departments and agencies which provide agriculture-related services to reserves and settlements, to ensure that deficiences in relation to non-native communities are corrected. While federal-provincial jurisdictional realities must be respected, it is nonetheless desirable that agencies of both governments work more closely together in the interests of the native communities concerned.

General

In closing, several limitations on the overall potential for agricultural development in native communities should be acknowleged. First, farming should not be viewed as a lucrative economic 'cure-all' particularly given the marginal physical conditions which prevail on many reserves and settlements. It requires long-term commitment, often with little immediate return on investment. Second, conventional types of agriculture are not highly labor-intensive in this mechanized era. The funds invested will not produce a large number of jobs, regardless of whether development occurs through band/settlement or individual units. Third, legitimate questions can be raised about the wisdom of encouraging such activities as livestock production--mainstay for many communities with marginal soils--at a time when the industry shows signs of long-term decline based on falling consumer demand for red meat. Will government support only serve to lead native communities into an economic dead-end? This concern would not preclude the development of agricultural production with an emphasis on local consumption.

However, while agricultural potential can be oversold, the fact remains that the land is perhaps the most important resource available for development among Alberta native communities. With adequate initial funding and training, fuller utilization of this resource can result in greater self-sufficiency, and bring much-needed capital into reserves and settlements. A significant number of individual and community-run farms have already demonstrated, sometimes against considerable odds, the ability to sustain viable operations of various sizes and types. Whatever the problems associated with agriculture in Alberta, it does not seem unreasonable that these and other native farms, at least, be placed on an equal footing with their non-native neighbours and given a chance to succeed. The results, no doubt, will be mixed, and spread unevenly across the provnce, but where gradual success is achieved a positive impact will be made on other individuals and communities.

APPENDIX A

COMMUNITY AGRICULTURE PROFILES

FORT VERMILION DISTRICT

Boyer River Band
Tall Cree Band
Little Red River Band
Dene Tha' Band
Paddle Prairie Metis Settlement

The Fort Vermilion area has supported cultivation of grain and oilseed cash crops. Average yields (1981-83) for Census Division 15 and Agricultural Reporting Area No. 7, of which it is a part, are as follows:

Wheat	1.94 tonnes/hectare	29 bushels/acre
Oats	2.07	54
Barley	2.03	38
Flax	0.80	13
Canola	0.94	17
Rye	1.63	26
Tame hay	3.41	

(Source: Alberta Agriculture Statistics Yearbook)

Generally, the level of production in those native communities with agricultural activity is average or below average for the area. Further development will likely follow the cash crop pattern.

Livestock production in the Fort Vermilion area is severely restricted by such factors as distance from marketing and processing services, harsh winter climate and insects.

Boyer River Band #445

Population Total:	332
0 - 5 Pre-School:	40
6 - 18 School Age:	121
19+ Adult:	161

	BOYER RIVER #164	CHILD LAKE #164A	TOTAL
TOTAL (Acres)	10,560	7,040	17,600
ARABLE	8,474	5,526	14,000
CULTIVATED			
Annual Crop			2,400
Summer Fallow			600
Perennial Forage			300
TOTAL CULTIVATED			3,300
IMPROVED PASTURE			-
NATIVE PASTURE			2,000

1,100 acres new breaking

Comments:

Agriculture at Boyer River has been developed primarily through a band-owned company, ATN Farms, which was created out of a takeover of a cooperative in the early 1970s. Since then, the company has been able to gradually increase and improve the agricultural land base through the use of its own equipment and labor, supplemented by short-term government job creation programs. Additional land is being developed as the company can afford it. Income is reinvested in the farm and in other economic development intiatives.

Almost all cultivated land--concentrated on reserve #164--is farmed by the band company, which is capably managed and has adequate equipment and facilities to sustain its operation. Band policy is to employ its own members. One individual who is knowledgeable in farm management is training others in various aspects of the operation. Advice is also regularly sought from federal and provincial agricultural departments, and from the farm trade sector.

Reserve terrain is flat to gently rolling, with a gradual slope toward the Boyer River. Native vegetation is a mixture of medium-sized poplar, willow and meadow grasses. Except for isolated areas of high salinity or poor drainage, all but the southeast corner of the main reserve is considered arable.

Tall Cree Band #446

Population Total:	335
0 - 5 Pre-School:	42
6 - 18 School Age:	96
19+ Adult:	139

	BEAVER RANCH #163	TALL CREE #173	TALL CREE #173A	TOTAL
TOTAL (Acres)	2,240	1,710	5,440	9,390
ARABLE	1,024	1,580	1,866	4,468
CULTIVATED				
Annual Crop				200
Summer Fallow				0
Perennial Forage				300
TOTAL CULTIVATED				500
IMPROVED PASTURE				700
NATIVE PASTURE				8,190

Comments:

Agricultural development on the Tall Cree reserves is at a preliminary stage, as band members begin to make the transition from traditional means of livelihood. While the chief and council have expressed interest in economic development in several areas, including agriculture, band resources are limited and considerable capital assistance would be required for land development and equipment purchases. The level of agricultural technology now used on the reserves is low.

While study into the reserves' agricultural capability is limited, Beaver Ranch #164 has been identified as having the greatest potential.

Little Red River Band #447

Population Total:	1474
0 - 5 Pre-School:	251
6 - 18 School Age:	573
19+ Adult:	571

JEAN D'OR PRAIRIE #215

TOTAL (Acres)	34,560
ARABLE	29,952
CULTIVATED	
Annual Crop	3,000
Summer Fallow	-
Perennial Forage	500*
TOTAL CULTIVATED	3,500
IMPROVED PASTURE	-
NATIVE PASTURE	

*Fields regrowing to grass and weeds

Comments:

Much of the land in agricultural production at Jean d'Or Prairie--2,600 acres--is leased to an off-reserve farmer, while the remainder is farmed by the band. In 1983, however, this land lay idle. Equipment was purchased to support the band operation but much of it has either been taken by creditors or has disappeared.

In the transition away from traditional means of livelihood, most band members have only seasonal employment in the oil and forestry industries. Among the economic development possibilities being considered by the band is the clearing and agricultural utilization of an additional 3,000 acres of land, but financing remains a major obstacle. The Native Economic Development Fund has been identified as a possible source of assistance. The opening up of new lands would also require construction of access roads.

The band farm has been involved in livestock production to a limited extent, but economic factors would seem to work against large-scale development of this agricultural sector.

Dene Tha' Band #448

Population Total:	1395
0 - 5 Pre-School:	200
6 - 18 School Age:	478
19+ Adult:	673

BUSHE RIVER # 207

TOTAL (Acres)	27,610
ARABLE	22,475
CULTIVATED	
Annual Crop	-
Summer Fallow	-
Perennial Forage	-
TOTAL CULTIVATED	
IMPROVED PASTURE	5,000
NATIVE PASTURE	

Comments:

Members of the Dene Tha' band are scattered throughout several reserves, with about 10 families at Bushe River. Work opportunities are seasonal and generally scarce.

While a few members at Bushe River and Assumption have expressed interest in gardening and small-scale farming, agriculture would seem to have a relatively low priority for the band. A previous band ranch and farm operation was abandoned, and agricultural prospects overall have been described as extremely limited, in part because of the reserves' physical isolation. Nonetheless, two off-reserve farmers have proposed the development of land at Bushe River under a lease agreement. Any such development would require construction of access roads to land as it is opened up.

Paddle Prairie Settlement #1

Population Total:	644
0 - 5 Pre-School:	67
6 - 18 School Age:	141
19+ Adult:	363

PADDLE PRAIRIE SETTLEMENT

TOTAL (Acres)	403,027
ARABLE	345,000
CULTIVATED	
Annual Crop	7,407
Summer Fallow	-
Perennial Forage	759
TOTAL CULTIVATED	8,166
IMPROVED PASTURE	1,920
NATIVE PASTURE	900

Comments*:

A. Existing Agricultural Activity:

Paddle Prairie has the highest level of agricultural development among the eight Metis settlements--with more cultivated land than the others combined--as well as considerable potential for expansion. Farming is the primary source of income for perhaps 15 settlers, some of whom have developed and now utilize between 1,000 and 2,500 acres. As is the case generally in the Peace River region, however, part-time outside employment is still necessary to sustain even the larger farm operations. Settlement farmers tend to be middle-aged

---

* This profile was prepared with assistance form the Metis Development Branch, Alberta Municipal Affairs. Some of the information was derived from the following publication: Al McCully and Hugh Seaton, Paddle Prairie Metis Settlement, Land Use Planning Inventory, Alberta Municipal Affairs, 1982.

and older; some interest has been expressed in agriculture by younger settlers, but the costs of land clearing and development, particularly without access to bank financing, are considered prohibitive. While formal training on the settlement is limited, the level of experience in various types of agriculture is relatively high.

Farming is concentrated southwest of the hamlet, generally along the Boyer River, which runs adjacent to Highway 35. This area is used for the growing of cash crops--including wheat, rye and canola--which are marketed primarily at Keg River; feed grains for settlement livestock; and, to a lesser extent, tame hay. Field size, while relatively large in relation to other settlements--the average was 92 acres for hay in 1981--nonetheless has been of concern to local farmers and the settlement council. Measures are also being considered to initiate development of arable lands next to existing roads which have been allocated to individuals but until now uncleared or underutilized.

Livestock production at Paddle Prairie is limited somewhat by the distance from markets and by insect problems. There are approximately 250 head of cattle on the settlement, as well as smaller numbers of horses and hogs. While there is a 2,720-acre community pasture west of the hamlet, it is now not in use by settlers. The land is being worked by an outside farmer under a short-term lease arrangement, and is to be reseeded to grass prior to being turned back to the settlement.

B. Potential

Land on Paddle Prairie Settlement is identified primarily as being of high and moderate capability, corresponding to CLI Classes 3 and 4. Higher capability land is found in several areas:

1) around the hamlet, where much of the land has been allocated to individuals and, in some cases, not fully developed;
2) the Armstrong Flats along the Peace River in the southwest corner of the settlement, which is undeveloped at present largely because there is no good road access;
3) along the Boyer River north of the hamlet; and,
4) near the Keg River in the south of the settlement.

Particularly in the first two areas, the soil is well-drained and the only major physical limitation is climate. Rainfall is inconsistent and the average frost-free period at nearby Keg River is 62 days. While some wheat is grown, the risk of early frost is high compared to other grain-growing areas of the province. Paddle Prairie's northern location, however, provides some additional daylight hours during the summer to partially compensate for the short season.

One area which could be made more productive is a strip of six to eight quarter-sections located along the highway south of the hamlet, which has been plagued by excessive wetness since a rail line was constructed through the area in the early 1960s. Some drainage work would be required for fuller utilization of this area.

Moderate capability land on the settlement is generally considered best suited to tame hay production and pasture. It has been suggested that hay production be expanded in these areas in order to free more high capability land for the growing of grain. Council has identified two large areas--one in the southeast and the other along the Chinchaga River in the west--as having particular potential in this regard, but such expansion would require extensive development of roads and utilities.

An expanded livestock industry could be supported by improvements to existing grazing areas in the community pasture and elsewhere, some of which have been cleared but left to regenerate to bush. However, for the reasons cited earlier, livestock production is unlikely to become a more significant agricultural activity on the settlement.

Paddle Prairie was the first settlement to express interest in wild game ranching, and contains several areas of excellent habitat for ungulates. Council has designated a large tract of land along the Keg River in the southeast as a potential ranching area, which would not conflict with other possible agricultural uses. At this point, however, the feeling on the settlement is that outside assistance would be required to initiate such a project.

Forestry has become relatively less important at Paddle Prairie in recent years as a source of employment, partly because of the increase in energy activity in the surrounding area. Settlement timber stands consist largely of aspen and poplar, for which there is little market, although some logging of spruce continues. Reforestation of commercial species has been initiated, and council has designated several small timber reserves, mostly outside areas identified as having high agricultural capability.

LESSER SLAVE LAKE DISTRICT

Horse Lake Band
Driftpile Band
Duncan's Band
Grouard Band
Sawridge Band
Sturgeon Lake Band
Sucker Lake Band
Swan River Band
Big Prairie Metis Settlement
East Prairie Metis Settlement
Gift Lake Metis Settlement

The growth of an agricultural base in many of these communities will require intensive development of complementing livestock and crop activities. Crop yields in this area generally are lower than in some other areas of Census Division 15 and Agricultural Reporting Area No. 7, for which average yields (1981-83) are as follows:

Wheat	1.94 tonnes/hectare	29 bushels/acre
Oats	2.07	54
Barley	2.03	38
Flax	0.80	13
Canola	0.94	17
Rye	1.63	26
Tame hay	3.41	

(Source: Alberta Agriculture Statistics Yearbook)

Horse Lake Band #449

Population Total:	174
0 - 5 Pre-School:	24
6 - 18 School Age:	71
19+ Adult:	69

	HORSE LAKE #152B	CLEAR HILLS #152C	TOTAL
TOTAL (Acres)	4,160	3,840	8,000
ARABLE	2,710	2,390	5,100
CULTIVATED			
Annual Crop			700
Summer Fallow			-
Perennial Forage			400
TOTAL CULTIVATED			1,100
IMPROVED PASTURE			700
NATIVE PASTURE			2,000

Comments:

Much of the agricultural development on the Horse Lake Reserve has been undertaken, with the help of band council, by three individuals who have assumed control of both the band farm and one other farming operation. The band farm is well-managed and should continue to develop viably.

Only one or two families live on the Clear Hills Reserve, which is used primarily for grazing off-reserve livestock.

The band, which receives some income from oil and natural gas, has plans for further agricultural development on both reserves, in part to alleviate a serious employment problem for its members, who must now seek work elsewhere. Development of farms at Clear Hills is planned for either 1985 or 1986. About 10 individuals are said to be interested in farming.

Driftpile Band #450

Population Total:	571
0 - 5 Pre-School:	83
6 - 18 School Age:	278
19+ Adult:	349

DRIFTPILE #150

TOTAL (Acres)	17,796
ARABLE	14,176
CULTIVATED	
Annual Crop	1,200
Summer Fallow	-
Perennial Forage	840
TOTAL CULTIVATED	2,040
IMPROVED PASTURE	160
NATIVE PASTURE	2,800

Comments:

Agriculture on the Driftpile Reserve includes a band farm and as many as eight individual operations. The band farm involves about 180 head of cattle as well as 300 acres of crop land. As well, the band operates a five-acre community garden, on which vegetables are grown primarily for use by reserve residents and, to a lesser extent, for sale in the Slave Lake area.

While band members are interested in agricultural development, many are discouraged by such factors as the high costs involved in starting and operating a farm.

Further development of reserve land for agriculture would require some surface clearing and breaking, as well as construction of access roads and extension of utilities to new areas.

Duncans Band #451

Population Total:	58
0 - 5 Pre-School:	5
6 - 18 School Age:	16
19+ Adult:	33

	WILLIAM McKENZIE #151K	PEACE RIVER CROSSING #151A	TOTAL
TOTAL (Acres)	962	4,953	5,915
ARABLE	962	4,911	5,873
CULTIVATED			
Annual Crop			2,500
Summer Fallow			250
Perennial Forage			
TOTAL CULTIVATED			2,750
IMPROVED PASTURE			407
NATIVE PASTURE			

Comments:

While the Duncan's Reserve contains some arable land and band members have some farming experience, interest in agriculture is limited, apparently because of a feeling that the costs would be too great to make such ventures profitable. As a result, cultivated land is leased to off-reserve farmers, with the income used to offset the band's administrative expenses. If more land was developed, it would likely be leased to outsiders as well.

Grouard Band #452

Population Total:	86
0 - 5 Pre-School:	12
6 - 18 School Age:	34
19+ Adult:	35

	FREEMAN #150B	HALCRO #150C	PAKASHAN #150D	TOTAL
TOTAL (Acres)	73	52	973	1,098
ARABLE	73	52	858	983
CULTIVATED				
Annual Crop				130
Summer Fallow				-
Perennial Forage				200
TOTAL CULTIVATED				330
IMPROVED PASTURE				
NATIVE PASTURE				478

Comments:

The agricultural land base of the Grouard reserves is limited, and perhaps is sufficient only to support a single viable farm. The land could be used for gardens and small farms to supplement other sources of income for band members.

Band officials were not available to meet and discuss agricultural potential.

Sawridge Band #454

Population Total:	42
0 - 5 Pre-School:	10
6 - 18 School Age:	17
19+ Adult:	21

	SAWRIDGE #150G	SAWRIDGE #150H	TOTAL
TOTAL (Acres)	2,400	3,800	6,200
ARABLE	964	3,008	3,972
CULTIVATED			
Annual Crop			
Summer Fallow			
Perennial Forage			
TOTAL CULTIVATED			
IMPROVED PASTURE			
NATIVE PASTURE			1,050

Comments:

The Sawridge band has not developed any of its land for farming purposes, and generally has not made agriculture a priority. It has invested the income from other natural resources in various business enterprises which maintain a high rate of employment and income for band members.

Sturgeon Lake Band #455

Population Total:	824
0 - 5 Pre-School:	104
6 - 18 School Age:	293
19+ Adult:	366

	STURGEON LAKE #154	STURGEON LAKE #154A	TOTAL
TOTAL (Acres)	21,450	650	22,100
ARABLE	18,690	650	19,340
CULTIVATED			
Annual Crop			700
Summer Fallow			
Perennial Forage			300
TOTAL CULTIVATED			1,000
IMPROVED PASTURE			
NATIVE PASTURE			

Comments:

Agricultural development on the Sturgeon Lake Reserve has been limited. While several livestock projects have been initiated, none has been highly successful. At this point the reserve's cultivated acreage is either leased to outsiders, is farmed by band members who have small part-time operations, or has been allowed to return to natural vegetation.

Although the band chief has expressed interest in developing more land and establishing viable farm units, he considers the financial and technical obstacles to be insurmountable. The band has no other major source of income, and employment for members is mostly seasonal.

Sucker Creek Band #456

Population Total:	653
0 - 5 Pre-School:	86
6 - 18 School Age:	169
19+ Adult:	371

SUCKER CREEK # 150A

TOTAL (Acres)	16,890
ARABLE	14,120
CULTIVATED	
Annual Crop	750
Summer Fallow	
Perennial Forage	600
TOTAL CULTIVATED	1,350
IMPROVED PASTURE	300
NATIVE PASTURE	1,000

Comments:

Agriculture on the Sucker Creek Reserve involves at least eight small-scale farmers and ranchers, with an emphasis on livestock. The production of forage crops is increasing, and more land is being cleared and developed for cultivation. The band estimates 8,000 acres could be utilized for agriculture. Over 80 per cent of reserve land is considered to have moderate capability or better, corresponding to CLI Classes 2 to 4, with poor drainage a problem in some locations.

While most band members are employed in other sectors--logging, trucking and related services--there is some interest in farming among younger reserve residents, and the band is exploring several possibilities. Most notably, it has acquired a herd of buffalo with the intention of starting a game ranch. It has also considered the idea of a band farm and, with the help of CESO, the growing of wild rice.

Swan River Band #457

Population Total:	263
0 - 5 Pre-School:	37
6 - 18 School Age:	75
19+ Adult:	118

SWAN RIVER #150E

TOTAL (Acres)	11,190
ARABLE	9,103
CULTIVATED	
Annual Crop	300
Summer Fallow	0
Perennial Forage	3,200
TOTAL CULTIVATED	3,500
IMPROVED PASTURE	200
NATIVE PASTURE	200

Comments:

Much of the Swan River Reserve's agricultural land is used for forage production, with relatively low yields. Only three to four band members are engaged in farming--essentially at a subsistence level--and the overall level of agricultural training on the reserve has been described as limited.

Severe flooding problems have hindered agricultural use on some land and would have to be resolved before development could proceed. On other land with agricultural capability, clearing, breaking and some drainage work would be required, as would the extension of access roads and utilities.

Big Prairie Settlement #3W

Population Total:	294
0 - 5 Pre-School:	16
6 - 18 School Age:	101
19+ Adult:	196

BIG PRAIRIE

TOTAL (Acres)	203,113
ARABLE	115,000
CULTIVATED	
Annual Crop	688
Summer Fallow	-
Perennial Forage	1,986
TOTAL CULTIVATED	2,674
IMPROVED PASTURE	4,288
NATIVE PASTURE	3,202

Comments*:

A. Existing Agricultural Activity:

The pace of agricultural development on Big Prairie settlement has accelerated in recent years, with an increase in the amount of improved land from 937 acres in 1968 to more than 10 sections. This still represents only a portion of the land identified as having at least moderate agricultural capability. Nearly 30 families are involved in farming, generally with part-time cow-calf operations. Some interest has been expressed in expansion.

---

*This profile was prepared with assistance from the Metis Development Branch, Alberta Municipal Affairs. Some of the information was derived from the following publication: Al McCully and Hugh Seaton, Big Prairie Metis Settlement, Land Use Planning Inventory, Alberta Municipal Affairs, 1982.

While some malt barley has been grown, agricultural land is utilized primarily for production of hay and feed grains, both for settlement livestock and, to a limited extent, for outside sale. The settlement has purchased some farm equipment to complement what is owned by individuals.

There are approximately 400 head of cattle at Big Prairie, as well as 100 horses. A cattlemen's association has been formed with several objectives, including assistance to settlers in establishing their own herds. Two community pastures--one in the southeast, one in the west--have been fenced and improved somewhat for grazing.

B. Potential:

Compared to adjacent Gift Lake settlement, Big Prairie has a considerable amount of high and moderate capability land--much of it still uncleared or underutilized--corresponding to CLI Classes 3 and 4. The range of crops which can be grown, however, is limited by such climatic factors as inconsistent rainfall and an average frost-free period at nearby High Prairie 91 days, but subject to considerable fluctuation. Soil quality varies across the settlement but generally drainage is poor and natural fertility is low.

Higher capability land accounts for approximately 20 sections, and is found in three locations. Two of these are small, and beyond the existing road network in the northern portion of the settlement. The third is a corridor extending from the southern boundary to the hamlet, where almost all agriculture now occurs and where most of the land has been allocated to individuals. Some of this land, however, has not been brought into agricultural production. As well, the most prominent activity is the growing of tame hay, which in the case of some land may represent an underutilization.

Moderate capability land accounts for about 125 sections, found extensively throughout the settlement. Council has expressed interest in opening up land north and west of the hamlet on both sides of the South Heart River. This would require substantial clearing, road extensions and bridges across two streams.

Expansion of livestock herds could be supported by improvements to existing tracts of grazing lands, within the community pastures and elsewhere. The settlement also contains some land which was once cleared and has since regenerated to bush, and which could more easily be developed for pasture. Council is seeking funds to purchase additional head of cattle on the assumption that larger herds and more intensively managed operations, such as feedlots, will increase viability.

Other land-based economic potential involves forestry and wild game ranching. While logging has played a major role in the local economy for several decades, and some activity continues, its role has diminished with the depletion of commercially-valuable stands. There is no reforestation program in place on the settlement but a timber reserve has been set aside in the east-central portion, far removed from areas of existing or potential agricultural development. There would seem to be sufficient room for expansion of both activities.

Regarding game ranching, meanwhile, a belt of land identified as having high capability for the raising of ungulates exists along the South Heart River, southwest of the hamlet. Again, this location is generally outside potential areas of agricultural development.

East Prairie Settlement #4

Population Total:	336
0 - 5 Pre-School:	23
6 - 18 School Age:	103
19+ Adult:	125

EAST PRAIRIE

TOTAL (Acres)	80,640
ARABLE	45,440
CULTIVATED	
Annual Crop	279
Summer Fallow	-
Perennial Forage	1,080
TOTAL CULTIVATED	1,359
IMPROVED PASTURE	933
NATIVE PASTURE	20,480

Comments*:

A. Existing Agricultural Activity:

Agriculture represents an important element in the economy of East Prairie. It involves at least 20 families, most on a part-time basis, in mixed grain and cattle operations.

---

*This profile was prepared with assistance from the Metis Development Branch, Alberta Municipal Affairs. Some of the information was derived from the following publication: Al McCully and Hugh Seaton, East Prairie Metis Settlement, Land Use Planning Inventory, Alberta Municipal Affairs, 1982.

The amount of improved land on the settlement has approximately tripled since 1968, although large tracts with moderate capability or better remain undeveloped. Farming is concentrated on terraced parcels along the East Prairie River, which runs through the settlement from its southern to northern boundaries. Field size is limited in some cases by such topographical factors as the meandering of the river.

Oats and barley are the primary grains grown at East Prairie with some off-settlement sale at elevators in Enilda and High Prairie. Tame hay is produced extensively to support local cow-calf operations, which involve about 125 head of cattle and as many horses. A community pasture has been established in the southwest portion of the settlement, encompassing what is considered higher capability land, but only six of the 32 sections allocated have been fenced, and use has been limited.

B. Potential:

East Prairie contains significant amounts of undeveloped or underutilized land with agricultural potential, corresponding to CLI Classes 3 and 4. Even on the higher capability lands, however, the range of crops which can be grown is limited by such climatic limitations as low spring precipitation and an average frost-free period at nearby High Prairie of 91 days, but subject to considerable fluctuation. Some wheat has been grown on the settlement, with only limited success.

Class 3 soil has been identified in three areas:

1) the terraced land along the river, where most agriculture now occurs and where most of the land is allocated;
2) the northeast corner of the settlement, said to be most suitable for forage production; and,
3) a belt in the southwest--now undeveloped and without road access--considered to have the best potential of the three for a range of crops.

The major limitation in the first area is steep sloping on some parcels. Within each of the remaining areas, council has identified land for agricultural development; road and utilities extensions would also be required.

Class 4, or moderate capability, soil is found largely in the eastern portion of the settlement. Characterized as low in natural fertility, this soil is considered best suited for forage production. Lower capability soils are found primarily in the south, and are also affected by excessive wetness. With extensive

fertilization and moisture control, some grazing and forage production could be sustained on these soils. Council has identified parcels within both moderate and lower capability areas as having some agricultural potential, although its land development efforts are being focussed on reclamation of previously-cleared tracts which have regenerated to bush.

Expanded livestock herds could be supported by improvements to existing grazing land. However, agricultural interest on the settlement has been primarily in crop cultivation rather than cattle production.

Other land-based economic potential involves forestry and wild game ranching. While logging has been part of the local economy for several decades, with activity concentrated in the western portion of the settlement, reforestation and increased timber management would be required for the future viability of the forestry sector. Council has identified several sites for logging and reforestation, with some overlap with areas having potential for agriculture.

East Prairie contains two areas considered to have high capability for the raising of ungulates, but again these areas overlap to some extent with potentially-productive agricultural land. However, little interest has been expressed in wild game ranching.

The market gardening of such hardier vegetables as potatoes has also been suggested for the settlement. Lands along the East Prairie River would likely be suitable for small-scale irrigation should it be required. At this point, however, interest in gardening is limited.

Gift Lake Settlement #3E

Population Total:	482
0 - 5 Pre-School:	37
6 - 18 School Age:	195
19+ Adult:	372

GIFT LAKE

TOTAL (Acres)	207,273
ARABLE	108,800
CULTIVATED	
Annual Crop	
Summer Fallow	
Perennial Forage	
TOTAL CULTIVATED	
IMPROVED PASTURE	
NATIVE PASTURE	

Comments*:

A. Existing Agricultural Activity:

Agriculture has never constituted a major land use or source of income on Gift Lake settlement. There is only one active farmer, who maintains a modest cattle and hay operation, while some settlers keep small numbers of livestock, primarily horses. In all there may be fewer than 50 head of cattle on the settlement. As many as five families are said to be interested in farming.

Although 10 sections of land have been allocated for agricultural purposes, only about 200 acres are utilized for tame hay production and pasture. The amount of improved land on the settlement has in fact decreased since the mid-1970s, as acreage cleared by the province has regenerated to bush. Existing agricultural land consists of small, fragmented parcels. While the settlement owns clearing equipment, its efforts have been related almost entirely to oil industry activity. A community pasture has been set aside north of the hamlet, but the land is unimproved and use is limited.

*This profile was prepared with assistance from the Metis Development Branch, Alberta Municipal Affairs. Some of the information was derived from the following publication: Al McCully and Hugh Seaton, Gift Lake Metis Settlement, Land Use Planning Inventory, Alberta Municipal Affairs, 1982.

B. Potential:

Much of the south-central portion of the settlement has been identified as having moderate agricultural capability, corresponding to CLI Class 4. The range of crops which could be grown, however, is limited by such climatic factors as low spring precipitation and the short growing season. While High Prairie has an average frost-free period of 91 days, subject to considerable fluctuation, the risk of frost remains high at Gift Lake throughout much of June. Settlement soil, meanwhile, is generally weak, with low permeability.

Settlement council has identified two areas with potential for agriculture:

1) approximately 10-1/2 sections south and east of the hamlet, where much of the land is allocated but underutilized; and,
2) approximately 17 sections at the southeastern tip, next to Utikuma Lake, where a high quality natural hay grows.

In the latter case, agricultural development would require some extension of access roads and utilities. Overall, Gift Lake council has more flexibility than councils in some settlements, because much of the designated land has not been allocated. Hence newly-opened parcels can more easily be restricted to those with demonstrated farming ability and the capital needed to develop the land.

The northern half of the settlement contains a higher degree of muskeg and the soil generally is of a poorer quality. Potential would seem confined to pasture. Council has indicated interest in developing small plots in the north for combined residence and livestock grazing purposes.

Other land-based economic potential involves forestry and wild game ranching. While logging has played a major role in the local economy for several decades, its importance has diminished because white spruce stands have been depleted and virtually no market exists for the more prevalent aspen and poplar. A limited amount of reforestation has begun in the southwest portion of the settlement. While there is considerable overlap between those areas identified as having greatest capacity for commercial forestry and agriculture, the settlement contains sufficient room for both to expand far beyond present levels without conflict.

Game ranching, meanwhile, has been suggested for more marginal land, but no potential sites have been identified.

SADDLE LAKE/ATHABASCA DISTRICT

Beaver Lake Band
Saddle Lake Band
Cold Lake Band
Frog Lake Band
Kehewin Band
Caslan Metis Settlement
Kikino Metis Settlement
Elizabeth Metis Settlement
Fishing Lake Metis Settlement

This area is best suited to mixed grain and livestock farming characterized by small but more intensively-managed production units. Average crop yields (1981-83) for Census Division 12 and Agricultural Reporting Area No. 6, of which these communities are a part, are as follows:

Wheat	2.14 tonnes/hectare	32 bushels/acre
Oats	2.30	60
Barley	2.49	46
Flax	1.13	18
Canola	1.12	20
Tame Hay	3.94	

(Source: Alberta Agriculture Statistics Yearbook)

Beaver Lake Band #460

Population Total:	304
0 - 5 Pre-School:	52
6 - 18 School Age:	107
19+ Adult:	124

BEAVER LAKE #131

TOTAL (Acres)	15,220
ARABLE	4,500
CULTIVATED	
Annual Crop	400
Summer Fallow	200
Perennial Forage	-
TOTAL CULTIVATED	600
IMPROVED PASTURE	1,000
NATIVE PASTURE	6,000

Comments:

While land on the Beaver Lake Reserve is considered marginal for some types of agriculture, it has potential for production of barley, oats, rapeseed, forage crops and livestock (both cattle and sheep). At present, some oats and barley are grown but yields are low, partly as a result of the limited technology used in crop production. There are about 100 head of cattle on the reserve, but again production levels are relatively low.

Generally, the resources available for agricultural development at Beaver Lake are inadequate. Considerable assistance would be required.

Saddle Lake Band #462

Population Total: 3960
0 - 5 Pre-School: 740
6 - 18 School Age: 1355
19+ Adult: 1844

	SADDLE LAKE #125	WHITEFISH LAKE # 128	TOTAL
TOTAL (Acres)	68,430	12,610	81,040
ARABLE	53,382	1,869	55,251
CULTIVATED			
Annual Crop			18,000
Summer Fallow			5,000
Perennial Forage			2,000
TOTAL CULTIVATED			25,000
IMPROVED PASTURE			1,200
NATIVE PASTURE			26,200

Comments:

Agricultural land on the Saddle Lake and Whitefish Lake reserves is farmed by a combination of individual members, a band farm and off-reserve lessees, with a high overall level of production. Particularly at Saddle Lake, there is a strong infrastructural base of education, agricultural training and development assistance for members. The band farm is a mixed grain and cattle operation. Several individuals are engaged in similar mixed farming activities. Some hogs (100 sows) and chickens are also raised.

Band, individual and off-reserve livestock are pastured on both reserves. While Whitefish Lake contains a smaller proportion of land suitable for crop production, it has large amounts of grazing land. There have been more than 1,000 head of cattle on the reserve.

The overall level of production and development is relatively high, as is the interest of reserve residents in agriculture. A number of Alberta Agriculture short courses have been provided at Saddle Lake in such subjects as beef production and farm management. There has also been some participation in the Green Certificate Program. The band can provide some resources for further development. Fully utilized, the two reserves could support 120 farm units.

Cold Lake Band #464

Population Total:	1045
0 - 5 Pre-School:	138
6 - 18 School Age:	362
19+ Adult:	533

COLD LAKE # 149

TOTAL (Acres)	36,340
ARABLE	26,466
CULTIVATED	
Annual Crop	2,000
Summer Fallow	500
Perennial Forage	300
TOTAL CULTIVATED	2,800
IMPROVED PASTURE	700
NATIVE PASTURE	16,000

Comments:

Agriculture on the Cold Lake Reserve includes the growing of several crops--wheat, oats, barley and canola--and the feeding of about 400 head of cattle, with production generally below average. The band and some individual members operate farms, but the overall level of interest is relatively low. Farming on the reserve is said to have declined, beginning in the 1950s, due in large part to the lack of access to capital required to modernize equipment. At present, much of the crop and grazing land is leased to off-reserve farmers.

While there is potential for about 40 viable farm units on the reserve, significant financial and technical assistance would be required for such development.

Frog Lake Band #465

Population Total:	885
0 - 5 Pre-School:	139
6 - 18 School Age:	367
19+ Adult:	379

	UNIPOUHEOS #121	PUSKIAKIWENIN #122	TOTAL
TOTAL (Acres)	22,920	25,530	48,450
ARABLE	12,572	11,854	24,426
CULTIVATED			
Annual Crop			3,000
Summer Fallow			-
Perennial Forage			450
TOTAL CULTIVATED			3,450
IMPROVED PASTURE			650
NATIVE PASTURE			1,800

Comments:

Agricultural land on the Frog Lake reserves is farmed by a combination of individual members, a band farm and outside lessees. More than 3,000 acres--including about 1,000 leased acres--are used for production of various crops, primarily oats, barley and hay. Some wheat and canola has also been grown. Yields generally are considered average for the area.

Because the growing of crops is somewhat limited by climate and the cost of clearing additional land, the band has identified its greatest agricultural potential as being in livestock production. There are now about 700 head of cattle on the reserves. Fenced pasture is plentiful--some is leased to outside ranchers--and enough feed could be grown on land already cleared to support larger herds. Two livestock possibilities have been identified for the band farm: cow-calf production and the raising of slaughter horses for export. In both cases considerable capital assistance would be required to establish herds and acquire suitable facilities.

Generally, the band has encouraged the development of its agricultural resources and provides on-reserve training to members, some of whom have also participated in the Green Certificate Program. The long-range intention is to operate the band farm on the basis that, once it proves successful, individual tracts of land will be allocated to trained members and band equipment will be made available to them.

Kehewin Band #466

Population Total:	833
0 - 5 Pre-School:	162
6 - 18 School Age:	252
19+ Adult:	330

KEHEWIN #123

TOTAL (Acres)	21,290
ARABLE	5,955
CULTIVATED	
Annual Crop	2,400
Summer Fallow	200
Perennial Forage	200
TOTAL CULTIVATED	2,800
IMPROVED PASTURE	415
NATIVE PASTURE	4,800

Comments:

About half of the Kehewin Reserve's arable land has been developed and is being farmed by about 25 individuals, most of whom have relatively small-scale operations. There is some interest on the part of band members in farming and ranching, utilizing available resources. The band is offering the services of a farm advisor and is providing training to individuals. But, as more young people show interest in farming, more land will need to be developed and other forms of assistance made available to meet the demand.

A home gardening project involving about 40 plots has also operated on the reserve.

Caslan Settlement #7W

Population Total:	655
0 - 5 Pre-School:	58
6 - 18 School Age:	154
19+ Adult:	286

CASLAN

TOTAL (Acres)	85,760
ARABLE	8,080
CULTIVATED	
Annual Crop	410
Summer Fallow	0
Perennial Forage	250
TOTAL CULTIVATED	660
IMPROVED PASTURE	321
NATIVE PASTURE	

Comments*:

A. Existing Agricultural Activity:

Agriculture represents the largest single source of employment on the Caslan settlement, although only limited development has occurred. About 30 families are said to be involved or at least interested in farming to some degree. Farms typically are small cow-calf operations run on a part-time basis, usually by older settlers, although interest has recently been expressed by younger members for whom few employment opportunities exist on the settlement. Few farmers have any formal agricultural training, but some courses are available in the area through the Alberta Vocational Centre.

---

*This profile was prepared with assistance from the Metis Development Branch, Alberta Municipal Affairs. Some of the information was derived from the following publication: Stanley Verbisky, Caslan Metis Settlement Land Use Planning Inventory, Alberta Municipal Affairs, 1985.

Farming is concentrated in the northern portion of the settlement between the hamlet and Highway 855. Almost all the land in this area identified as having moderate agricultural potential has been allocated to individual settlers in quarter-section parcels, but only a small portion is in production. Fields are fragmented; most are considerably smaller than 100 acres. Approximately 1,300 acres are utilized for grain and hay crops, and as pasture. The northeast quarter of the settlement--17,000 acres in all--has been designated as community pasture and is fully fenced. Grazing privileges are now restricted to settlers, although most have small herds and prefer to keep their cattle on their home parcels during the summer.

While livestock has been Caslan's agricultural mainstay, unfavorable market conditions have caused a decline in the total herd size from approximately 355 head of cattle in 1976 to fewer than 200 in 1984. Virtually all grain and forage crops are used to feed settlement livestock.

B. Potential:

Three agriculture-related activities--crop cultivation, livestock production and wild game ranching--have been proposed as land use priorities for Caslan. While settlement land is largely considered to have low agricultural capability, corresponding to CLI Class 5 and below, some undeveloped Class 4 land remains in the north and central portions, on which a limited range of crops could be grown with proper management. Physical constraints include strongly-rolling topography, poor soil fertility and adverse climate. The average frost-free period is between 65 and 75 days.

Considerable expansion of livestock operations could be accommodated with improvements to existing pasture and development of new grazing areas. At present, feed yield per acre on the community pasture is low and, as a result, extensive grazing land is required to support even small numbers of livestock. Brushing and planting of suitable grasses have been suggested as means of maximizing use. Also, the possibility of draining marshland to create hay meadows has been raised.

The southeast quarter of the settlement, which has a higher concentration of lakes and muskeg, and is considered to have little agricultural potential, has been identified as having particular capability for the raising of ungulates. The pilot project at Kikino--adjacent to Caslan--is being monitored with some interest.

The possibility of growing wild rice in the lake area south of the hamlet has also been discussed on the settlement.

Commercial forestry potential is considered limited and, as such, development of this resource has not been identified as a major land use priority. Settlement council, however, is examining the viability of a 'post and pole' operation using the poplar which is plentiful throughout the settlement. Rather than designating a large tract of land for cutting, such an operation would involve settlers bringing in poplar from their own land.

Kikino Settlement # 7E

Population Total:	671
0 - 5 Pre-School:	74
6 - 18 School Age:	252
19+ Adult:	256

KIKINO

TOTAL (Acres)	110,720
ARABLE	7,280
CULTIVATED	
Annual Crop	
Summer Fallow	
Perennial Forage	
TOTAL CULTIVATED	
IMPROVED PASTURE	
NATIVE PASTURE	

Comments*:

A. Existing Agricultural Activity:

Agriculture is the major land use on Kikino settlement, with a strong orientation toward livestock production. More than 20 families are involved in cow-calf operations of various sizes--the average is 50 to 70 head, while some are as large as 150 head--and much of the settlement has been set aside as pasture.

Farming is concentrated in the central part of the settlement, where most land with identified agricultural potential has been allocated to individual families in quarter-section parcels. Much of this land, however, remains underutilized. While small amounts of oats and barley are grown, outside purchases of feed grain are necessary to maintain cattle herds through the winter. Hay is grown on as many as 2,000 acres. Settlement pastures consist almost entirely of unimproved grassland.

Until 1977, the provincial government maintained a cattle herd at Kikino to provide settlers with access to breeding stock. Since then, herd sizes have declined somewhat as a result of rising costs of feed and replacement stock. A cattlemen's association has been formed on the settlement to assist in developing grazing land and otherwise promote livestock production. Some raising of rodeo stock has recently begun.

*This profile was prepared with assistance from the Metis Development Branch, Alberta Municipal Affairs.

Kikino has also been the site of a pilot project in wild game ranching, for which an association consisting of all settlement members has been formed, and an area of 11 1/2 sections allocated and fenced in the southwest quarter. Some grazing land has also been developed. While the game herd has included as many as 100 head of buffalo, it has since been reduced to about 60 with the culling of older bulls. The herd also contains about 30 elk and smaller numbers of deer and moose.

B. Potential:

Kikino is considered to have severe soil, topographical and climatic limitations regarding sustained production of field crops. There is a small amount of land in the southeast portion of the settlement--now uncleared and without road access--identified as corresponding to CLI Class 4. Even here, however, low soil fertility and an average frost-free period of 65 to 75 days restrict the range of crops which could be grown.

CLI Class 5 land is most prevalent on the settlement, which also contains substantial areas of marsh. The Class 5 land, while moderately well-drained, is also low in natural fertility and is susceptible to erosion. Generally, the agricultural uses considered most suitable to Kikino are the growing of hay and short-season feed grains, and the grazing of livestock. In the latter case, larger herds could be supported with improvements to existing pasture, on which feed yield is low. There is also interest on the settlement in developing new forage fields.

Further potential for wild game ranching, particularly in buffalo and elk, has been affirmed by a 1984 evaluation of the pilot project,* which concluded the operation was competently managed and represented an effective use of marginal land. Some expansion of the ranch's fenced grazing area is scheduled for 1985. A five-year development plan also calls for major buffalo calf production by 1987 and full-fledged commercial viability by 1989. Factors identified as having limited development include lack of funding, scarcity of breeding stock and provincial legislation prohibiting sale of wildlife products. The need for a marketing strategy has also been raised.

Kikino settlement is considered to have only moderate capability for commercial forestry and development of this resource does not command a high land use priority.

---

*Dabbs Environmental Services, "Kikino Wildlife Ranch," Prepared for Alberta Native Affairs Secretariat, November 1984.

Elizabeth Settlement #9

Population Total:	363
0 - 5 Pre-School:	60
6 - 18 School Age:	127
19+ Adult:	176

ELIZABETH

TOTAL (Acres)	63,236
ARABLE	7,884
CULTIVATED	
Annual Crop	
Summer Fallow	
Perennial Forage	
TOTAL CULTIVATED	
IMPROVED PASTURE	
NATIVE PASTURE	

Comments*:

A. Existing Agricultural Activity:

Agriculture on the Elizabeth settlement involves both a community farm and as many as 50 families who feed varying numbers of cattle on a part-time basis. Perhaps one larger cow-calf operator is able to make a living primarily from farming. While few settlers have any formal agricultural training, many have worked on area farms and have experience with machinery and management practices.

The community farm, still in its formative stage, is a mixed operation which feeds about 50 head of cattle and grows forage crops, partially for sale to settlement members. The farm has about 300 acres in hay and 145 acres in oats. At present, much of the settlement's land clearing and development budget is focussed on the farm, which employs a small number of settlers.

---

*This profile was prepared with assistance from the Metis Development Branch, Alberta Municipal Affairs. Some of the information was derived from the following publication: Ken D. Kelly, Elizabeth Metis Settlement Land Use Inventory--Planning for the Future, Alberta Municipal Affairs, 1985.

The growing of oats, barley and hay generally is concentrated near the settlement hamlet, where almost all land with road access and identified agricultural potential has been allocated to individual settlers, although much of it remains underutilized. Most fields are small and fragmented. While grain is grown strictly for feed, some barley was once sold off-settlement at Grand Centre.

The southern half of the settlement contains a 48-section grazing lease held by the Soars Lake Cattlemen's Association. The lease area--mostly unimproved pasture, much of it tree-covered--provides grazing for 2,000 head of off-settlement cattle as well as about 1,000 head belonging to settlers, whose stock was developed partially from a government herd maintained at Elizabeth until 1977.

B. Potential:

Settlement council has shown considerable interest in developing Elizabeth's agricultural potential. In 1982, together with the Federation of Metis Settlements and Rural Venture Inc., it prepared a long-term strategy which included the establishment of the community farm with several objectives: the training of individual settlers, testing of new specialty crops, introduction of grain production and increasing of forage yields. Market gardening was also suggested as a possibility, although no further efforts have been made in this regard. Other aspects of the strategy concerning the community farm are being implemented gradually, as funding permits.

The extent of Elizabeth's potential, meanwhile, remains a matter of some disagreement. Apart from scattered pockets corresponding to CLI Class 4, the settlement consists of Class 5 land and below. According to a 1984 planning document, some of this land could be used to produce a limited amount of forage; the remainder is either too wet or too hilly for sustained production. Moreover, while nearby Bonnyville has an average frost-free period of 95 to 105 days, Elizabeth falls within a more severe climatic zone which restricts the range of crops which could be grown.

Other studies, however, are more optimistic about the land's potential. The 1982 strategy paper suggested as many as 16,000 acres could be utilized for crop production. A subsequent CESO evaluation proposed a figure of 18,000 acres for forage-cash crop rotation. It also suggested that the greatest obstacles to agricultural development were not physical, but rather were psychological and financial. Development on the scale envisioned in either study would require massive expansion of land clearing efforts, as well as perhaps a redivision of previously-allocated land to create more viable units for those wanting to farm.

Expanded livestock herds could be accommodated on the settlement with improvements to existing pastures--the southern grazing lease in particular--and an increase in forage production, reducing reliance on costly off-settlement feed purchases. One possibility raised by settlement officials would be the clearing of fertile land around some lakes for growing hay. Development of a feedlot has also been suggested as a long-term option should volume and market conditions warrant it.

While the settlement's southern half has been identified as providing excellent habitat for ungulates, interest in game ranching would seem limited. Such a land use could also conflict with grazing of cattle in the area.

Various aspects of forestry potential, including firewood and fencepost production, as well as a tree nursery, have been considered in recent years. In all cases, however, it was concluded that the projects were either not viable or at least too risky to warrant investment of settlement funds. Hence agriculture would seem to have a higher land use and economic development priority.

Fishing Lake Settlement #10

Population Total:	325
0 - 5 Pre-School:	48
6 - 18 School Age:	116
19+ Adult:	193

FISHING LAKE

TOTAL (Acres)	93,760
ARABLE	6,080
CULTIVATED	
Annual Crop	
Summer Fallow	
Perennial Forage	
TOTAL CULTIVATED	
IMPROVED PASTURE	
NATIVE PASTURE	

Comments*:

A. Existing Agricultural Activity:

Virtually all families on the Fishing Lake settlement are involved in agriculture to some degree, generally on a part-time basis in small cow-calf operations. The more active farmers tend to be relatively young, with an average age of about 30. Several have participated in Green Certificate, range management and other programs, or have taken courses at Lakeland College, but the overall level of agricultural training is low.

Farming is concentrated in two small pockets in the southwest corner of the settlement: west and north of the hamlet of Sputinow, and north of Fishing Lake. These two pockets contain the only settlement land identified as having moderate agricultural capability. Although

---

*This profile was prepared with assistance from the Metis Development Branch, Alberta Municipal Affairs. Some of the information was derived from a draft copy of a land use planning inventory made available by the Branch.

almost all this land has been allocated to individual settlers, much of it remains underutilized. Fields are small and fragmented due to piecemeal clearing and topographical constraints; none are as large as 100 acres.

Crops grown at Fishing Lake--oats, barley and various grasses--are used as feed for livestock, although most farmers must also make costly off-settlement purchases to maintain their herds during the winter. One recent count estimated settlers owned about 700 head of cattle, although total herd size can vary considerably depending on the time of year and the state of the livestock industry.

The Sputinow Community Pasture Association, consisting of settlement members, holds a 69-section grazing lease in the northern half, but this land is largely unimproved. About 2,000 head of off-settlement cattle are also grazed in this pasture for a fee to cover fencing, range-riding and other costs. Apart from providing employment for settlers, the pasture generates some revenue which is applied to various settlement undertakings.

B. Potential:

Fishing Lake settlement contains extensive areas of bog and wetland, but approximately two-thirds of its land base is considered to have some potential for conventional agricultural production. The soil, however, is predominantly CLI Class 5, and is characterized by poor drainage and low natural fertility. The range of crops which could be grown is further limited by climate. While nearby Bonnyville has an average frost-free period of 95 to 105 days, Fishing Lake is located within a more severe zone and, as a result, experiences a shorter growing season. Despite these limitations, feed grains and hay could be produced with sustained drainage practices and extensive fertilization.

Agricultural development has received strong support on the settlement. Council has prepared an agricultural strategy emphasizing the expansion of livestock production and proposing the development of grazing lands in the northern pasture area. It is estimated three to four times more cattle could be accommodated with improvements such as the draining of hay meadows flooded by beaver dams and the reclearing and seeding to grass of areas allowed to regenerate to bush. This, in turn, could justify an increase in grazing fees charged to outside ranchers--now significantly lower than those of some nearby pastures--and create more revenue for the settlement.

Wild game ranching has been proposed as a possible use of more marginal land in the north, some of which has been identified as providing excellent habitat for ungulates. But because game ranching can be incompatible with the grazing of livestock, such development could conflict with use of this area as pasture. In any case, interest in game ranching on the settlement does not seem high.

EDMONTON/HOBBEMA DISTRICT

Alexis Band
Alexander Band
Hobbema Bands (Ermineskin, Louis Bull, Montana, Samson)
Enoch Band
Paul Band

These reserves are situated on some of the best farmland in the province. Average crop yields (1981-83) for Census Division 11 and Agricultural Reporting Area No. 5, of which they are a part, are as follows:

Wheat	2.48 tonnes/hectare	37 bushels/acre
Oats	2.59	68
Barley	2.58	48
Flaxseed	1.23	20
Canola	1.38	25
Rye	1.97	31
Tame Hay	4.75	

(Source: Alberta Agriculture Statistics Yearbook)

Alexis Band #437

Population Total:	718
0 - 5 Pre-School:	123
6 - 18 School Age:	260
19+ Adult:	296

ALEXIS #133

TOTAL (Acres)	15,820
ARABLE	8,928
CULTIVATED	
Annual Crop	440
Summer Fallow	
Perennial Forage	4,017
TOTAL CULTIVATED	4,457
IMPROVED PASTURE	4,000
NATIVE PASTURE	

Comments:

The Alexis Band maintains a mixed cow-calf and grain operation which employs as many as six of its members. There are also several individual farms on the reserve, as well as a community pasture which is leased to outside ranchers.

There is some interest in the expansion of agriculture on the reserve, whose residents derive their income mainly from seasonal employment. Land currently used as community pasture would be one development possibility, although the band would lose whatever income is generated from leasing the pasture.

Alexander Band #438

Population Total:	709
0 - 5 Pre-School:	122
6 - 18 School Age:	260
19+ Adult:	286

ALEXANDER # 134

TOTAL (Acres)	17,600
ARABLE	13,820
CULTIVATED	
Annual Crop	3,650
Summer Fallow	580
Perennial Forage	1,110
TOTAL CULTIVATED	5,340
IMPROVED PASTURE	2,500
NATIVE PASTURE	3,500

Comments:

The Alexander Band farms most of the reserve's agricultural land and also maintains a herd of about 250 head of cattle. There is also one individual farmer on the reserve, while another 1,500 acres are leased to outside interests. A community pasture is utilized for a game ranch of 200 buffalo and for grazing about 525 head of off-reserve cattle.

Traditionally, band members who occupied farmland via hereditary practice, with few exceptions, subleased it to off-reserve farmers on a crop-share basis. The band farm was created during the 1960s by renting back several of these small holdings from band members and merging them into a larger unit, with the intent of generating more revenue and creating employment on the reserve. To date, however, the farm's success has been mixed. While it does employ a number of band members--three year-round and as many as six more seasonally--it has also continued to require an operating subsidy from the band. As well, there has been some concern over the need to develop a farm manager from within the band. The position is now filled by an outsider. In a 1984 study of the farm, a series of training steps were recommended as a means of developing local people to assume management roles.

Interest in growing wild rice on the reserve has also been expressed.

Hobbema Four Bands

(Ermineskin #443, Louis Bull #439, Montana #442, Samson #444)

Population Total: 5437
0 - 5 Pre-School: 1078
6 - 18 School Age: 1924
19+ Adult: 2049

	LOUIS BULL#138B	SAMSON #137	MONTANA #139
TOTAL (Acres)	8,170	32,530	7,170
ARABLE	5,893	26,985	5,644
CULTIVATED			
Annual Crop	2,000	15,081	2,000
Summer Fallow	666	3,000	-
Perennial Forage	2,077	2,000	792
TOTAL CULTIVATED	4,743	20,081	2,792
IMPROVED PASTURE	1,787	3,800	2,188
NATIVE PASTURE		5,744	940

	ERMINESKIN #138	PIGEON LAKE #138A	TOTAL
TOTAL (Acres)	25,550	4,860	78,280
ARABLE	24,500	3,535	66,557
CULTIVATED			
Annual Crop	12,000	0	31,081
Summer Fallow	1,490	0	5,156
Perennial Forage	317	844	5,930
TOTAL CULTIVATED	13,807	844	42,267
IMPROVED PASTURE	3,067		10,842
NATIVE PASTURE	6,515	730	13,929

Comments:

The four bands at Hobbema operate independently, except for joint administration of the Pigeon Lake hunting and fishing reserve. Each of them has a band farm utilizing land both on their respective reserves and in surrounding counties, where substantial purchases have been made with funds derived largely from reserve revenues. There are also several individually-operated farms and ranches. Financing, generally, is handled through local commercial lenders on the basis of band guarantees. Other band assistance is also available to members.

While some reserve land is still farmed by outsiders, under lease from individual members, such arrangements are generally being phased out as leases expire and the land is being rented to rapidly-expanding band operations. The Ermineskin band farm, for example, has grown from 500 acres in the early 1970s to more than 7,200 acres of cultivated land in 1984. In 1985, it expects to have 8,500 acres in production, with about 1,500 acres in hay--the farm sells large quantities of square and round bales across the province--and the larger portion in wheat, oats and barley. The farm has a large inventory of up-to-date equipment and storage facilities. It has a workforce of between 10 and 25 employees--with some outsiders in management positions, as is the case with the three other bands--for whom on-reserve training courses are available during the winter through Olds College.

Livestock production is also prominent at Hobbema. The Samson band farm, which also has a large grain operation, has built up a feed lot and maintains a sizeable herd of cattle. Among its successes has been the sale of 1,000 head of cattle to South Korea.

Overall, a combination of band financial resources, good farmland and experienced and industrious members has made agriculture a major land use and economic activity for the four reserves. Fully developed, reserve and off-reserve holdings could support both the four band farms and as many as 100 viable individual operations.

Enoch Band #440

Population Total:	828
0 - 5 Pre-School:	179
6 - 18 School Age:	357
19+ Adult:	325

STONY PLAIN #135

TOTAL (Acres)	12,800
ARABLE	9,628
CULTIVATED	
Annual Crop	4,800
Summer Fallow	990
Perennial Forage	0
TOTAL CULTIVATED	5,790
IMPROVED PASTURE	710
NATIVE PASTURE	1,480

Comments:

The Enoch band has a large mixed farm which includes some land holdings off the reserve. Portions of the reserve's arable land are also farmed by individual members and by neighboring farmers through lease arrangements.

The band farm, apart from crop production, has both cattle and hog operations; the latter is said to be among the largest in the province. The farm is managed by outside professions, with band members filling middle-management and labor positions. In order for band members to take over all aspects of the operation, additional agricultural training would be required.

Because the Enoch Reserve is located on Edmonton's western boundary, agriculture faces considerable competition from more urban-oriented land use options. Hence, there is greater need for planning to designate areas for agricultural, residential, light industrial and recreational development. The band has some of the resources required for assisting economic development on the reserve.

Paul Band #441

Population Total:	828
0 - 5 Pre-School:	179
6 - 18 School Age:	357
19+ Adult:	325

	WABUMUN #133A	WABAMUN #133B	TOTAL
TOTAL (Acres)	15,960	440	16,400
ARABLE	12,574	396	12,970
CULTIVATED			
Annual Crop			919
Summer Fallow			
Perennial Forage			8,492
TOTAL CULTIVATED			9,411
IMPROVED PASTURE			
NATIVE PASTURE			2,000

Comments:

The chief and administrator of the band were not willing to discuss the present status and potential of agriculture on the reserve.

BLACKFOOT/STONEY/SARCEE DISTRICT

Blackfoot Band
Sarcee Band
Stoney Bands (Bearspaw, Chiniquay, Wesley)
O'Chiese Band
Sunchild Band

The first two reserves, Blackfoot and Sarcee, are situated in the black, dark brown and brown soil zones, with land suitable for growing a wide range of crops. Average crop yields (1981-83) for combined Census Divisions 6 and 91, which include the Sarcee Reserve, and near which the Blackfoot Reserve is located*, are as follows:

Wheat	2.66 tonnes/hectare	40 bushels/acre
Oats	2.76	72
Barley	3.03	56
Flax	1.23	20
Canola	1.47	26
Rye	2.29	36
Tame Hay	3.88	
Sugarbeets	44.38	
Corn	6.33	
Feed corn	41.94	
Winter Wheat	2.63	

(Source: Agriculture Alberta Statistical Yearbook)

The remaining three reserves are situated in more marginal areas where agricultural potential lies almost entirely in livestock and related forage production.

---

*Figures for combined Census Divisions 6 and 9, and for Census Division 5, in which the Blackfoot Reserve is located, are similar in almost all cases. Also, yields given for the last four crops are provincial figures, with production limited to southern Alberta.

Blackfoot Band #430

Population Total:	3151
0 - 5 Pre-School:	492
6 - 18 School Age:	1148
19+ Adult:	1452

BLACKFOOT #146

TOTAL (Acres)	178,580
ARABLE	111,242
CULTIVATED	
Annual Crop	48,168
Summer Fallow	
Perennial Forage	960
TOTAL CULTIVATED	49,128
IMPROVED PASTURE	
NATIVE PASTURE	125,000

Comments:

Cultivated land on the Blackfoot Reserve is worked by a band farm, individual members and off-reserve lessees, with the latter group accounting for about half the total acreage. Grazing land is also utilized by both band members and outside ranchers. There are as many as 35 reserve families involved in agriculture, with many having farmed successfully for a number of years. Other band members are interested in farming and ranching. Old Sun Community College at Gleichen is developing an agriculture program to provide training locally.

The band's major emphasis in terms of agricultural expansion lies in irrigation. It describes the reserve as 'a dry island in the midst of irrigated plenty,' with the main canal of the Bow Rivier Irrigation District forming the southeast boundary but not serving the reserve. The band estimates 16,000 acres could be irrigated from

this canal and has requested access to provincial funding programs in order to build the necessary distribution system. A water rights licence for 5,000 acres has been obtained, but no development has occurred. A claim has also been made involving land taken for the Eastern Irrigation District headworks and the Bassano Dam and reservoir.

With irrigation, it has been estimated the reserve could support as many as 100 individual viable farm or ranch units. The development of market gardening--particularly in potatoes--has also been proposed.

Sarcee Band #432

Population Total:	694
0 - 5 Pre-School:	109
6 - 18 School Age:	233
19+ Adult:	325

SARCEE # 45

TOTAL (Acres)	69,826
ARABLE	36,580
CULTIVATED	
Annual Crop	20,000
Summer Fallow	
Perennial Forage	4,000
TOTAL CULTIVATED	24,000
IMPROVED PASTURE	
NATIVE PASTURE	26,000

Comments:

While most farmland on the Sarcee Reserve is leased to outsiders, the band does operate a 4,000-acre farm and three individual members work about 2,000 acres in total. There are as many as 40 ranchers. Cattle from neighboring ranches is also grazed on the reserve.

Because the Sarcee Reserve lies on the southwest side of Calgary, agriculture faces competition from more urban-oriented land uses. Thus there is a need for planning which designates areas for agricultural, residential, recreational and other development, particularly because some of the reserve's best farmland is found in the area adjacent to Calgary.

Although the band is content to lease much of the reserve's arable land to outsiders, there is potential to support as many as 70 viable individual units should agricultural development gain a higher priority. Such alternate activities as beekeeping and market gardening have also been suggested.

Stoney Bands

(Chiniquay #433, Wesley #475, Bearspaw #473)

Population Total:	2382
0 - 5 Pre-School:	368
6 - 18 School Age:	832
19+ Adult:	1064

	STONEY #142, 143, 144	STONEY #142B	BIGHORN #144A
TOTAL (Acres)	99,720	14,080	5,000
ARABLE	0	0	0
CULTIVATED			
Annual Crop			
Summer Fallow			
Perennial Forage			
TOTAL CULTIVATED			
IMPROVED PASTURE			
NATIVE PASTURE			

	EDEN VALLEY #216	TOTAL
TOTAL (Acres)	4,181	122,981
ARABLE	1,190	1,190
CULTIVATED		
Annual Crop		
Summer Fallow		
Perennial Forage		
TOTAL CULTIVATED		
IMPROVED PASTURE		
NATIVE PASTURE		

Comments:

Agricultural activity on the Stoney reserves has been focussed on livestock production. At present, the AIADC is assisting 12 families on the reserves at Morley with cow-calf operations and related forage development projects. Several other families are said to be interested in applying for similar assistance.

At Eden Valley, the local administration has recently purchased more than a section of land and acquired a 10-year lease to a ranch adjacent to the reserve, with the intention of building a herd for distribution to members and perhaps of beginning a feedlot operation. Funding is being pursued from various federal and provincial government agencies.

O'Chiese Band #431

Population Total:	368
0 - 5 Pre-School:	43
6 - 18 School Age:	135
19+ Adult:	168

O'CHIESE #203

TOTAL (Acres)	34,070
ARABLE	0
CULTIVATED	
Annual Crop	
Summer Fallow	
Perennial Forage	
TOTAL CULTIVATED	
IMPROVED PASTURE	
NATIVE PASTURE	

Comments:

Agricultural land potential on the O'Chiese Reserve is limited and, until recently, no activity existed. Three individuals are now involved in cow-calf operations. The band is committed to preparing more than 400 acres for pasture and forage production, and has been highly supportive of agricultural development. The AIADC is anticipating additional requests for assistance once agriculture is more firmly established on the reserve.

Sunchild (Cree) Band #434

Population Total:	467
0 - 5 Pre-School:	87
6 - 18 School Age:	168
19+ Adult:	181

SUNCHILD #202

TOTAL (Acres)	13,080
ARABLE	0
CULTIVATED	
Annual Crop	
Summer Fallow	
Perennial Forage	
TOTAL CULTIVATED	
IMPROVED PASTURE	
NATIVE PASTURE	

Comments:

Agricultural land potential on the Sunchild Reserve is limited, but two families have begun small cow-calf operations with help from the AIADC. Additional requests for assistance are anticipated once agriculture is more firmly established on the reserve.

BLOOD/PEIGAN DISTRICT

Blood Band
Peigan Band

These reserves lie in the dark brown and brown soil zones, as well as in the relatively mild chinook climatic belt. These factors, combined with irrigation, permit the growing of a wide range of crops. As well, the area is suitable for year-round grazing of livestock.

Average crop yields (1981-83) for Census Division 3 and Agricultural Reporting Area No. 3, of which these reserves are a part, are as follows*:

Wheat	2.18 tonnes/hectare	32 bushels/acre
Oats	2.04	54
Barley	2.54	47
Flaxseed	1.23	20
Canola	1.47	26
Rye	2.29	36
Tame Hay	3.88	
Sugarbeets	44.38	
Corn	6.33	
Feed corn	41.94	
Winter Wheat	2.63	

(Source: Alberta Agriculture Statistical Yearbook)

---

*These figures do not distinguish betweend dryland and irrigation farming. Also, yields given for the last four crops are provincial figures, with production limited to southern Alberta.

Blood Band #435

Population Total:	5969
0 - 5 Pre-School:	894
6 - 18 School Age:	1959
19+ Adult:	2904

BLOOD #148

TOTAL (Acres)	344,100
ARABLE	266,180
CULTIVATED	
Annual Crop	160,000
Summer Fallow	
Perennial Forage	1,000
TOTAL CULTIVATED	161,000
IMPROVED PASTURE	
NATIVE PASTURE	173,000

Comments:

Agricultural land is the major resource available for immediate development on the Blood Reserve, the largest and most populous in the province. The land is farmed by a combination of band operations, individual members and off-reserve lessees. Management of cultivated land generally is considered good; that of grazing land is fair.

The band has been involved in several successful farming ventures intended not only to generate revenue but also to provide employment and training to members. These ventures include:

a) a 6,700-acre dryland farm in the southeast portion of the reserve;
b) a mixed irrigation and dryland farm in the north;
c) a feedlot which can accommodate 1,200 head of cattle; and,
d) a ranch.

As well as conventional grain crops, the band has grown potatoes on 300 acres of irrigated land, for sale to a local processor. Although some senior farm employees have continued to come from off the reserve, the band has developed a group of capable managers since it received a measure of self-administration in the late 1960s.

While there are several individually-operated farms on the reserve as well as the band ventures, perhaps 85 per cent of cultivated land is leased to outsiders by either the band or individual occupants. The lease option was promoted by Indian Affairs after the Second World War, as a means of raising capital to support existing farms. While revenues are now substantial--$1 million for the band and $5 to 6 million for individual members, according to a 1983 estimate--the need has also been expressed to make room for young people who want to farm, and for whom other employment opportunity are limited. A 1979 economic development master plan gave highest priority to Indian farming and ranching of the reserve's agricultural land.

At present, however, band policy is to continue to permit leasing of farmland, while concentrating on the development of irrigation. The reserve is bounded by irrigation rivers and contains canals and related works for neighboring districts, built by the federal government in the 1950s in exchange for a cash settlement and a commitment to provide an irrigation water rights licence to 25,000 acres in the northeast. The province assumed this obligation when it gained control of the St. Mary district headworks. The band has prepared a large-scale plan to develop irrigation farming on land it holds in the northeast--a block known as the 'Big Lease' and worked by outsiders--and has been involved in lengthy negotiations with the federal and provincial governments for funding to construct the required works and distribution system. It is difficult to project how quickly an agreement may be reached in order that development can proceed. Meanwhile, irrigation would also be possible on 10,000 acres in the south but is considered by the band to have a lower priority, partly because the area receives moderately high rainfall.

Farming is encouraged on the reserve through various means, including a recently-formed agricultural society, which will direct some of its efforts at young people and plans to organize a 4-H club. The society will also conduct seminars on a range of agricultural subjects. Blood Reserve farmers previously have made considerable use of Alberta Agriculture resources. Some have participated in the Green Certificate Program. As well, agricultural courses are taught at St. Mary's High School on the reserve.

Peigan Band #436

Population Total:	1907
0 - 5 Pre-School:	271
6 - 18 School Age:	626
19+ Adult:	899

PEIGAN #147

TOTAL (Acres)	104,650
ARABLE	78,343
CULTIVATED	
Annual Crop	28,655
Summer Fallow	
Perennial Forage	2,690
TOTAL CULTIVATED	31,345
IMPROVED PASTURE	
NATIVE PASTURE	65,085

Comments:

Much of the grazing and cultivated land on the Peigan Reserve is leased to outsiders. Only one band member is actively farming, while another 40 are ranching. The band also operates a ranch which to date has generated only limited revenues; lack of success has been attributed to previous management. Pasture on the reserve generally is undeveloped and has been described as extremely rugged in places.

Considerable potential for irrigation development has been identified for the reserve. In a 1981 agreement with the provincial government, the band received, among other things, funding for a pilot project and a commitment of technical assistance in irrigation development, in exchange for continued control over and access to headworks located on the reserve. Any large-scale development, however, would also require substantial financial assistance as well as strong management and long-range planning on the part of the band council. Fully developed, there is potential for perhaps 60 farm and ranch units on the reserve.